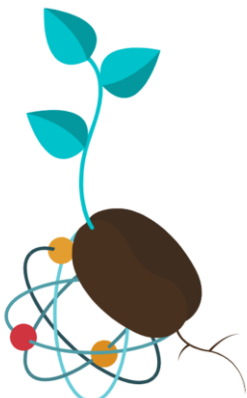


**DELIVERABLE 3.1.
INTERVENTION
PROTOCOL AND
MATERIALS**



SEEDS

VERSION V.3

VERSION CONTROL SHEET

• Project summary

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DISCLAIMER

This publication is the sole responsibility of SEEDS Consortium and reflects only the authors' view. Thus, the European Commission (EC) is not responsible for any use that may be made of the information it contains.

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ABBREVIATIONS

CA	Consortium Agreement
CoR	Gemeente Rotterdam
D&C	Dissemination and Communication
DMP	Data Management Plan
DPO	Data Protection Officer
EB	Executive Board
EC	European Commission
ECSA	Verein Der Europaeischen Burgerwissenschaften - ECSA E.V.
EU	European Union
EMC	Erasmus Universitair Medisch Centrum Rotterdam
GDPR	General Data Protection Regulation
H	Humans
HUA	Charokopeio Panepistimio
IISPV	Fundació Institut d'Investigació Sanitària Pere Virgili
IM	Innovation Manager
NDA	Non-Disclosure Agreement
PA	Physical activity
PC	Project Coordinator
PE	Physical Exercise
Q&E	Quality & Ethics
SEEDS	Science Engagement to Empower Disadvantaged Adolescents
STEM	Science, Technology, Engineering and Mathematics
SWAFS	Science With And For Society
TL	Tasks Leaders
UOE	University of Exeter
WP	Work Package



LIST OF TABLES AND FIGURES

Figure 1. Outline of Greek interventions.

Figure 2. Outline of Spanish interventions.

Figure 3. Outline of Dutch interventions.

Figure 4. Outline of English interventions.

EXECUTIVE SUMMARY

Science Engagement to Empower Disadvantaged Adolescents (SEEDS) aims at fostering science interest, literacy and STEM (Science, Technology, Engineering and Mathematics) education, by raising the health understanding, also pursuing the empowerment of youth in an extreme citizen science based on the participation of leader' adolescents in all the research process: analysis of adolescents barriers and necessities for having a healthy lifestyles, designing a community-based public intervention for adolescents of low-socioeconomic areas and with potential stakeholders participation, analysis of data and dissemination to community.

The present document provides the details of the 4 interventions of SEEDS project, designed in the makeathons event in each pilot country (Greece, Spain, The Netherlands and The United Kingdom). The 4 interventions resulted are focused on the primary outcomes, healthy snacks, physical activity (PA) and sedentary behaviour, and also on the secondary outcomes which were chosen by ambassadors during the focus groups (described in deliverables D2.1 and D2.2).

1. INTRODUCTION

Adolescence is a great period to promote healthy lifestyles since young adults are sufficiently mature to understand the reasons behind behavioural adoption¹, and behaviours that are taken in adolescence can have a long-term impact on the individual's health and wellbeing².

Adolescents may be considered a hard-to-reach group, as they could be more difficult to engage in research and health education programs than adults or younger children, particularly in deprived communities³. There is, therefore, a gap in the scientific knowledge concerning effective interventions for adolescents and inclusive approaches to empower them to engage in healthy lifestyles.

The SEEDS project is a Citizen Science project that aims to engage and actively involve adolescents in generating new knowledge whilst producing scientifically legitimate and reliable results. We will train adolescents in scientific methods and enhance critical thinking. This will help them in making decisions based on scientific evidence and reliable information. We will empower adolescents and support them in creating change to promote a healthy lifestyle.

In this context, makeathons are a good solution to create an intervention. Makeathons are creative, collaborative challenges in a short, predetermined amount of time that bring together makers from different backgrounds to reflect on and tackle a single cause together. The makers work in teams to freely create whatever they want from a preset theme or subject, which is revealed to participants at the last moment so that they have free rein to improvise. All disciplines can take part, and everyone can interpret the theme in their own way. Participants come together to create an object or piece of work that is environmentally friendly, unique, and innovative⁴.

The makeathons were implemented in November – December 2021, in the four pilot countries (Greece, Spain, The Netherlands and The United Kingdom). Makeathons were focused on the primary outcomes, healthy snacks, physical activity (PA) and sedentary behaviour, and also on the secondary outcomes which were chosen by ambassadors during the focus groups (described in deliverable D2.2). After collecting all the ideas of the participants during the makeathons, an intervention per pilot country was created.

This deliverable provides the details of the 4 interventions of SEEDS project which will be implemented from January to June 2022.

¹ Steinberg L, Morris AS. Adolescent Development. Annual Review of Psychology. 2001;52(1):83–110.

² O'mahony M, Samek L. Health and Human Capital. 2016.

³ Curtis K, Roberts H, Copperman J, Downie A, Liabo K. How come I don't get asked no questions?' Researching 'hard to reach' children and teenagers. Child and Family Social Work. 2004;8(2):167–75.

⁴ Welcome to the jungle. Adapted from "Going the Distance with Makeathons—'Makers' Marathons' Explained" [Internet]. [cited 2022 Jan 21]. Available from: <https://www.welcometothejungle.com/en/articles/en-going-the-distance-with-makeathons-makers-marathons-explained>

2. INTERVENTIONS OF CHAROKOPEIO PANEPISTIMIO (HUA) (Greece)

The final intervention of HUA is focused on two behaviors, snacking and PA. This intervention will last from January to May 2022. The monthly organization of the activities implementation is summarized in Figure 1.

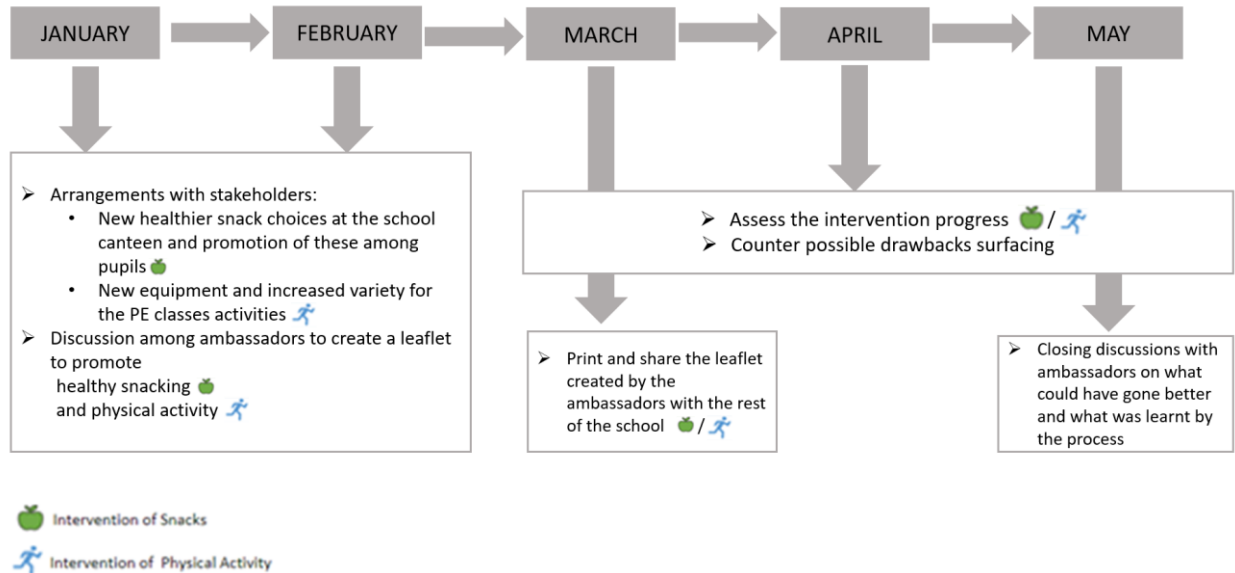


Figure 1. Outline of Greek interventions.

2.1.1. Month 1 - Month 5: Healthier food choices by the school canteen & Larger variety in activities in PE classes with better equipment

The first component will consist of increasing the availability of healthier food choices at the school canteen. These choices include foods like fruits and juices, whole-grain cereal bars, whole grain bagels and custom-made toasts. These choices were proposed and voted by the ambassadors. The new food choices will be promoted by the school canteen owner and the ambassadors via a small poster put at the school canteen and on various school billboards. This aims to make pupils increase consumption of healthier snacks during school hours. The adherence will be assessed by receiving feedback by the canteen personnel (by opened questions) whether the promoted products are indeed chosen more frequently by the school pupils and by talking to the ambassadors about how their fellow pupils feel about the new choices. In parallel, a leaflet promoting healthy snack choices at school (whether being ones bought from the school canteen or ones brought from home) will also be created in collaboration with the ambassadors to boost impact. It is an environmental change activity that will be carried out from January to May. In case of a lockdown, there will be a promotion of healthier snacking at home via a newsletter promoting healthier snack choices.

The second component will consist of having new equipment available for the pupils in physical exercise (PE) classes and promoting a variety of alternative non-competitive activities for the pupils in order to increase engagement in classes. The aim is to increase the engagement of pupils in activities that are less competitive and more joyful, focusing more on participation and fun rather than competing and winning. The PE teachers will be suggested to promote exercises other than the typical ones covering sports rules, such as body training exercises, team activities with circulating exercises and more free games with balls. It is also planned to ensure that relevant equipment needed for these activities such as mattresses, hoola hoop rings and balls in a good and clean condition will be available. Pupils will also be advised to bring their own roll mat or towels to help them with the exercises. The adherence will be assessed from feedback by the ambassadors about enjoyment from participating in PE classes (by opened questions). In addition, in order to increase the impact, a leaflet will be created in collaboration with the ambassadors emphasising on the benefits of PA and promoting non-competitive activities of moderate intensity as long as social interaction, fun and joy to ensure sustainability. It is an environmental change activity that lasts 5 months, from January to May.

In case of a lockdown, a suggested plan is to promote social interaction of the pupils via face-to-face outdoor activities. It is likely that another newsletter will be sent to the pupils promoting PA at home.

3. INTERVENTION PLAN OF FUNDACIÓ INSTITUT D'INVESTIGACIÓ SANITÀRIA PERE VIRGILI (IISPV) (Spain)

The final intervention of Spain has been developed from the ideas generated through the 4 Makeathons. Due to the high number of participants in the Makeathons, a lot of innovative ideas came out. The IISPV team has restructured these ideas and designed the final intervention for the three behaviours: PA and healthy snacks as primary outcome and screentime as secondary outcome. Different types of activities have been designed for each behaviour. The monthly organization for the activities implementation is summarized in Figure 2.

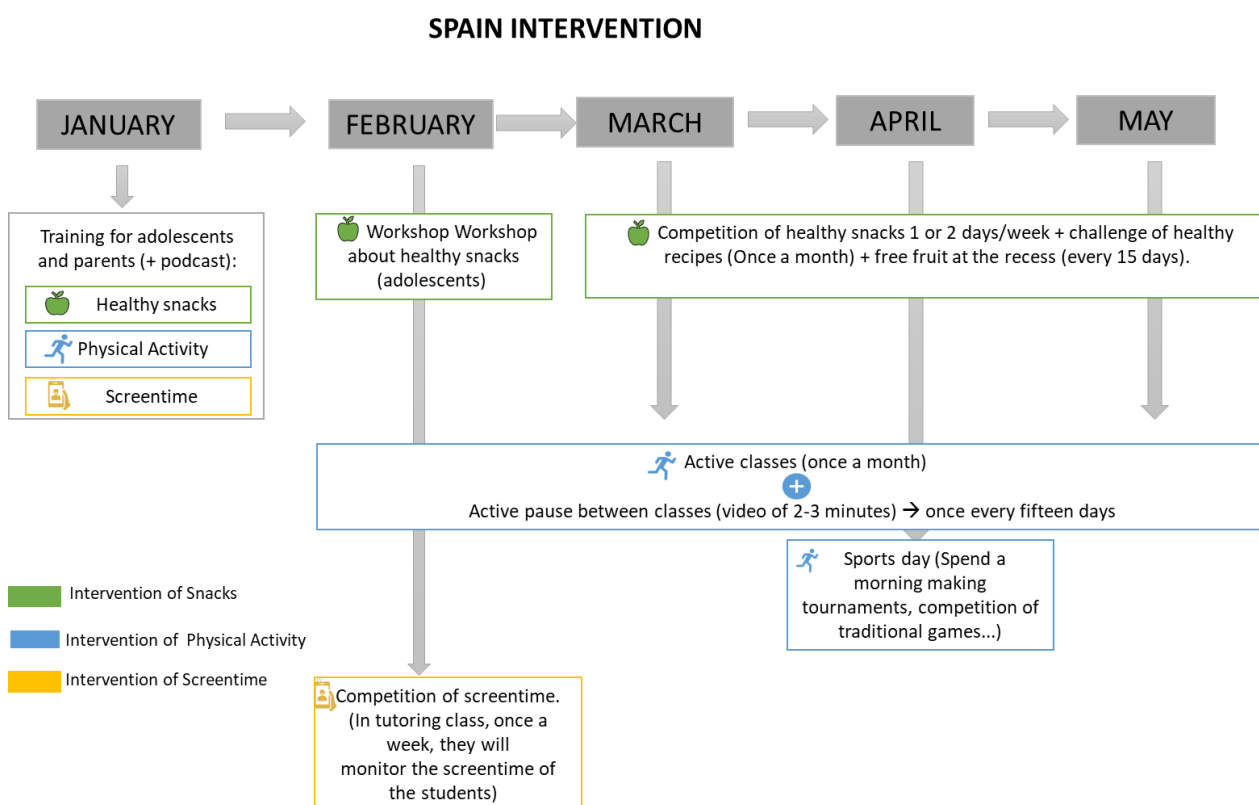


Figure 2. Outline of Spanish interventions.

3.1. Month 1: Trainings of snacks, PA and screentime

The activities that will be carried out during January will be:

- a face- to-face training about healthy snacks, screen time, PA and sedentarism for the adolescents' parents.
- a face-to-face training about the same topics for adolescents.

The trainings, given by IISPV researchers, will be carried out separately with a duration of 1 and 1,5 – 2 hours for parents and teenagers, respectively. In order to inform parents about the training, teachers and parents' associations will act as a communication link between the research team and the parents. They will arrange a date that suits for both the parents and the high school.

The training for parents will be a talk to give information about the project, the importance of healthy eating and doing PA for adolescents, and they will be warned about the risk of screen time. Also, the training will include practical tips to improve the family diet, in particular, the snacks' consumption by adolescents. This training will be online following the COVID rules of the high schools (parents are not allowed to enter into high schools). In addition, for those parents who are unable to attend the training, a video like a webinar will be prepared with the content of the training so that they can listen to it, when available. Moreover, a poster will be shared with the parents, including some tips about healthy snacks for their children (see Annex 1).

The adherence will be assessed with the list of participants who attend the training, and people who watch the video.

The training for the adolescents will be quite different. In this case, the training will be face-to-face during school hours and the content will be information about the importance of healthy eating and doing PA, and the risk of screen time. The training will end with an organisational workshop so that they will learn how to optimise their time by doing different free activities available in some centres and organizations near the location of every high school. The stakeholders provided us this information. With this support, it is hoped that they will spend more time doing leisure and sporting activities, thus reducing the time spent on screens. The training will be carried out by the researchers of IISPV at the high school. In addition, a weekly and monthly planner will be shared with adolescents (see Annex 2).

In case of a lockdown for COVID situation, the training will be carried out through a virtual platform (Teams, Zoom, etc.). The adherence will be assessed with the list of participants who attend the training. In this case, the teachers will be connected with their students (that is to say, adolescents of intervention high schools).

3.2 Month 2: Workshop of snacks, high school active and screen time competition

In February, different activities will be carried out: a health snacks workshop aimed at adolescents, active classes and active breaks between classes, and a screen time competition.

3.2.1. Healthy snacks workshop

The first activity, the healthy snacks workshop, will last 1 hour. This workshop aims to teach basic cooking skills and practices to cook the quick, easy and cheap healthy snacks recipes that adolescents will be able to make at home. The workshop will take place face to face in a compulsory subject, including the whole class (if COVID allows us), and it will be given by a specialist in healthy cooking, supported by the SEEDS project dieticians (pre and post doctoral researchers). The workshop will be held in a special area of the high school or in the same classroom depending on the facilities of each high school. The event will be promoted through the high school website, the [SEEDS website](#) and our [Twitter account](#). Moreover, researchers will

share the recipes prepared by adolescents in the workshop using the same tools. The adherence will be assessed with the list of participants who attend the workshop.

In case of a lockdown due to COVID, a video with healthy snacks recipes will be prepared and shared with adolescents through YouTube platform, using a private session (for not contaminating the control group). The adherence will be evaluated using the total number of views.

3.2.2. Active class

The second activity is to do more active classes, one class/month with a different dynamic than usual from February to May. Teachers of high schools will carry out a more dynamic class in the classroom, or the school playground, or they will do short trips around the school to teach a topic or subject related to the trip, such as a cultural visit of the Roman ruins. These classes will be organised by the teachers and the activities developed will be related to the subject matter of the course.

In case of a lockdown for covid, this activity will be performed through virtual classes, the teacher could prepare active classes where the students have to stand up to carry out some lesson's activity. The adherence will be assessed with the list of participants who attend this virtual class.

3.2.3. Active breaks

The third activity promotes active breaks of 2-3 minutes in long-term classes (2h) or between those classes in which students stay in the same classrooms, once every 15 days. Active breaks consist of playing a 2-3 minutes video with choreographies, relaxation exercises or mobility exercises to stay more active. To do so, the classrooms will need to be equipped with a screen, projector, loudspeakers and a computer. The researchers of IISPV will provide the videos to the teachers to reproduce them in class. These videos will be recorded by a PA professional.

In case of a lockdown for COVID, the teachers will reproduce the video at the end of the virtual class and the adolescents will do the exercises remotely at home. The adherence will be assessed with the list of participants who attend this virtual class.

3.2.4. Screen time competition

The competition aims to minimise the use of screens by the teenagers, thereby reducing the overall amount of screen time. In this activity, each class will compete to achieve the least number of hours spent on the screen. The focus is to increase other types of activities such as sport or discovering other hobbies that they could learn at the adolescents' training (January's activity).

Once a week, in the tutorial classes, teachers will monitor the screen time of each student in the class. The ambassadors will help teachers to do this monitoring. The total score will be calculated including the total class. The teacher will have a checklist (see Annex 3) designed by the researchers where the score to be given to each student is indicated according to the hours spent in front of the screen. The sum of the score of each adolescent will give the total score by class.

This competition will finish at the end of February. The points obtained in the screen time competition will be added to other competition carried out in the following months.

In case of a lockdown for COVID, in the virtual tutorial classes, the tutor will be able to monitor the screen time of each student by asking them to report their scores. The adherence will be assessed by the list of participants and the checklist.

3.3 Month 3: Healthy snacks competition and high school active

During March, the healthy snacks competition will take place and the active class and active breaks will continue. These last two activities have already been explained in the previous sections, 2.2.2 and 2.2.3.

3.3.1. Healthy snacks competition

This activity aims to improve the healthy snacks at high school through competition-driven environmental change. The competition consists of eating a healthy snack 1 or 2 days a week (the total days and the specific days will be chosen by the high schools, depending on their availability). Moreover, researchers from the SEEDS project will launch a challenge during the competition. The dietitians of the SEEDS project will provide a booklet of healthy snacks recipes to high school. The tutors and ambassadors of each class will share one recipe a month.

The challenge consists of bringing this recipe cooked by themselves on Mondays to obtain extra points. The snacks prepared by the students will be monitored by the ambassadors of the high school and a teacher who taught the class the hour before the recess. In tutorial class, the snacks will be scored (according to their healthiness) by the ambassadors of each class using a checklist (see Annex 4) designed by researchers of SEEDS. In case the students bring the snack recipe on Monday, they will get an extra score. The points will be added to the previous points from the screen time competition.

In case of a lockdown for COVID, the school teachers will send the healthy snacks recipes and the students will have to make them at home. To verify that they have prepared the recipe, they will have to send a photo of the snack to the teacher so that it could be rated. The adherence will be assessed by the list of participants and the checklist.

In addition, the researchers of IISPV will contact a fruit provider to supply fruit to the high schools, once every 15 days, for all adolescents. In this way, the adolescents who cannot afford to buy healthy snacks at home, they will also have the opportunity to score points in the competition.

3.4. Month 4: Healthy snacks competition, high school active and sports day

Healthy snack competition, active class and active breaks between classes will continue throughout April. In addition, a sports day which will last one morning will be done.

3.4.1. Sports day

This is an activity that aims to change the environment by increasing the practice of sport in high school, during a school-day. The sports day consists of spending a morning making a competition of sports tournaments, competitions of traditional games, dance, etc. The sports and games that they will play will be voted by the students to guarantee their participation. This sports' day will be carried out and organized by the PA teachers, with the support of SEEDS' researchers. In addition, the researchers will provide monitors to support, to supervise and to implement the different sports activities that will take place that day. The event will be requested to be shared by the media available to the high school (i.e. website) to ensure the maximum number of participants and to promote the activity. Moreover, the event will be promoted on [SEEDS Twitter](#) and [website](#). The adherence will be assessed by the list of sports day participants.

In case of a lockdown for COVID, unlike previous activities, this activity will be removed.

3.5. Month 5: Healthy snacks competition and high school active

Healthy snack competition, active class and active breaks between classes will continue throughout May. These activities have already been explained in the previous sections (snacks competition in 2.3.1, active class in 2.2.2 and active breaks in 2.2.3).

3.6. Total score of competition

Each competition activity (hours of screen time and healthy snacks at recess time) will be calculated at the end of May resulting a final score of SEEDS competition. The total score will be done by class (not individually). The winning class will receive some local products such as hazelnuts, nuts cream, healthy vegetable chips, etc.

4. INTERVENTIONS OF EMC and City of Rotterdam (CoR) (The Netherlands)

4.1. Development of intervention

The final intervention of the Netherlands has been developed from the ideas of 1 Makeathon with ambassadors from two intervention schools and various stakeholders. First of all, the Dutch SEEDS researchers collected all ideas and drafted a first overview of possible interventions. We discussed this first draft in 4 meetings with stakeholders from both healthy nutrition (Onwijs

Gezond!⁵, Voedingscentrum⁶, policymaker healthy environment, City of Rotterdam(CoR)⁷ and PA (Rotterdam SportSupport⁸, Sportbedrijf Rotterdam⁹) as well as with teachers from both schools. After this meeting the Dutch SEEDS team further developed the intervention. We discussed the next version of the intervention with ambassadors (high school students) in one meeting per school. With their feedback we developed the last version of the intervention. This version we discussed in one meeting per school with the teachers. The main stakeholder involved in the nutrition components (Onwijs Gezond!) agreed on supporting the student ambassadors group on nutrition.

4.2. Overview of the intervention

Different type of activities have been designed for each behaviour: nutrition and PA. The activities in both components are closely linked to each other. The nutrition component consists of 3 activities: creating a healthy school canteen, a lesson package about healthy eating and cooking workshops. Some activities from the lesson package or cooking workshops could possibly integrate with the healthy school canteen and providing healthy lunch. The physical activity component consists of 2 activities: providing workshops for new sports and creating more PA opportunities during the breaks. In each school we will divide the ambassadors over 2 project groups. One group will focus on healthy nutrition and the other group will focus on PA. Those project groups, consisting of ambassadors supported by a teacher from their school, will think along, help out or guide (parts of) the SEEDS activities. All students have the possibility of joining both the PA and nutrition activities.

For all activities, if possible the presence and participation of boys and girls will be monitored. If this is not possible, supervisors/teachers of each activity will be asked to estimate the gender division for each activity.

⁵ <http://www.onwijsgezond.nl/>

⁶ <https://www.voedingscentrum.nl/nl/service/english.aspx>

⁷ <https://www.lekkerfit010.nl/>

⁸ <https://www.rotterdamssportsupport.nl/>

⁹ <https://www.sportbedrijfrotterdam.nl/>

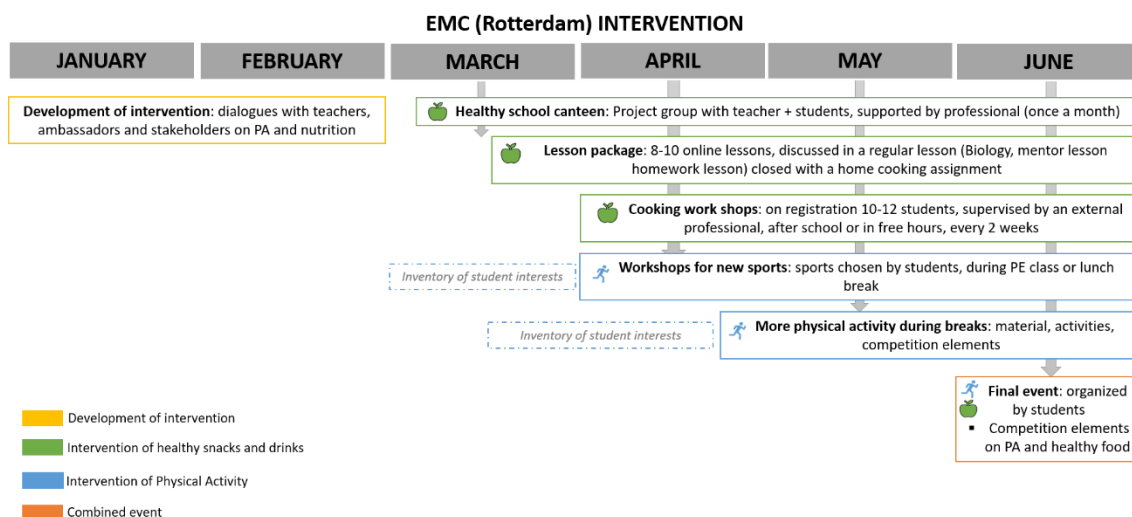


Figure 3. Outline of the Dutch interventions.

4.3. Activity 1: Students creating a healthy school canteen

A project group will be formed within each school consisting of 3-6 ambassadors and a teacher and/or canteen representative. They will have a kick-off meeting in March followed up by monthly meetings at school with an expert on healthy school canteens from Onwijs Gezond! and frequent support of a policymaker from the CoR with expertise on healthy food environments. Onwijs Gezond! is a company, formerly started in Rotterdam, providing tailor-made advice and solutions to make schools healthier. CoR is considered an essential partner for the long-term implementation of the healthy school canteen. Therefore, they are included as a partner in this project group to ensure that important lessons will be implemented at future schools that want to improve their canteen.

The meetings with the project group and Onwijs Gezond! will be once a month and will take 45 minutes – 90 minutes each time. During those monthly meetings the project group will decide together what the agreements, tasks and meeting schedule will be between the students and teacher.

Based on an existing roadmap developed by the Dutch Nutrition Center and tailor-made by Onwijs Gezond!, they will work towards a healthy school canteen^{10 11}. In the Netherlands, there are national guidelines for school eating environments and schools can earn different scales for their own canteen based on how healthy it is. To date, this road map does not include participation of students. It is a new concept that students will work on getting to a healthy canteen themselves.

¹⁰ Nutrition Centre. *Steps to a healthy school canteen*. Available from: <https://www.disdh.nl/Portals/0/gezonde%20school.pdf>

¹¹ Evenhuis IJ, Vyth EL, Nassau Fv, Veldhuis L, Westerman MJ, Seidell JC and Renders CM (2021) *What Do Secondary Schools Need to Create Healthier Canteens? The Development of an Implementation Plan*. Front. Public Health 9:683556. doi: 10.3389/fpubh.2021.683556

At baseline, they will complete a canteen scan to gain insight into the healthiness of their school canteen. After that, together with Onwijs Gezond! and the project group, they will decide the different steps that have to be taken to earn a scale for their own school canteen. This might include adjusting products in the canteen, adjusting school policies and paying attention to healthy nutrition in lessons.

The following output will be monitored:

- Participation in the project group is assessed by the list of attendees to each project group meeting.
- The baseline status of the school canteen and the (number of) changes made. Different steps can be added to the roadmap towards a healthy school canteen and the progress on this roadmap will be discussed.

4.4. Activity 2: Lesson package about nutrition

“Weet wat je eet” is an existing lesson package developed by the Dutch nutrition institute, consisting of 10 online lessons about healthy eating for students aged 12 to 15 years¹². It is a free package and can also be given remotely as they are online lessons. A lesson takes about 30 minutes and consists of information, videos, interactive assignments and tests. This lesson package will be offered to all students in grade 1, 2 and 3. During a regular class (Biology, mentor class, homework class) the lesson made will be discussed by teachers from school. They can follow the progress of students in an online teacher environment. This lesson package will be started in March/April and content will be adapted to the time available and interest of the students.

The last lesson of this package will be a home cooking assignment. Students can register for an ingredient box provided by the SEEDS team. They can collect this at school and do the cooking assignment at home, preferably in small groups with their friends.

We will monitor the number of students completing the online lessons and the number of lessons performed per individual. Participation in the home cooking assignment can be assessed by the number of registrations for the ingredient boxes.

Outline of the lesson package

- Do you eat healthy?
- This is how you eat healthy
- Keep your energy in balance
- Have fun with fruits and vegetables
- Food as fuel for your body

¹² <https://wwje.nl/>

- Balancing nutrients – watch out for added sugar, salt and fat
- Prevent food infections
- Choose sustainable
- Read labels
- Hijack the kitchen – Home cooking assignment

4.5. Activity 3: Cooking workshops (extracurricular)

The cooking workshops will start in April and will take place every 2-4 weeks. The workshop will take place at school or available facilities in the neighbourhood, like community centers, after regular classes and will last 45 – 90 minutes. The workshops will be given by an external professional. Students can register for those extracurricular workshops, and only 10-12 students can participate each time. Depending on students interest, we will organise one or multiple workshops.

The cooking workshops will focus on how to make tasty food also healthy! Detailed content of the workshop will be determined by the professional in combination with the wishes of the students, for example healthy lunches to be offered to students at their canteens could be part of the activity if they want to.

We will monitor the the number of registrations. Adherence can be assessed by the list of attendees to each cooking workshop.

In case of a lockdown due to COVID, it is not possible to do in person cooking workshops and this activity will be cancelled.

4.6. Activity 4: Workshops to meet new sports

A project group will be created consisting of ambassadors (3-6 students) who will be supported by a PE teacher. They will create a survey for an inventory of students interests within their school. When they know which workshops from new sports they want to do, local sport clubs will be contacted for those workshops. We will make use of existing contacts from schools, but also existing contacts from the Municipality of Rotterdam. Workshops will be given in April-June.

The sport workshops will be chosen by students and will take place during the PE class or lunch break at school. Depending on when it will take place, the workshop can last from 15 to 90 minutes.

We will count the number of responses to the survey, and monitor the number of workshops per school, and for reach the number of attendees during workshops.

In case of a lockdown due to COVID, it is not possible to do in person sport workshops and this activity will be cancelled.

4.7. Activity 5: More PA opportunities during breaks

More PA opportunities during breaks can vary from new material, new activities/games and/or competition elements. The project group on PA will create a survey for an inventory of students interests and needs within their school. They will also do a brainstorm with local policymakers working at the CoR who focus on active school days and smart breaks to gain insight in the opportunities for their own school. The project group will be created in March, whereas the first new opportunities will start in April. The frequency and duration of new activities will depend on the wishes and needs of students.

If suitable for the activity, students will be trained to lead activities during breaks and will create more opportunities for their peers to be physically active during the break.

We will count the number of responses to the survey, monitor the number of new activities organized during breaks, and if possible the number of participants during each event.

In case of lockdown due to COVID, it is not possible to do in person activities during breaks and this activity will be cancelled.

4.8. Activity 6: Final event

To close the SEEDS project at school, we will organize a final event for and together with students. This event will take place in June-July.

Both project groups will brainstorm about this event and organize activities. We will gather students ideas and based on this information we will organize a final event together with the ambassadors. Possible activities can be a celebration of the healthy school canteen and competition elements in both exercise and nutrition. If needed, different external professionals can play a role in this final event.

We will monitor the number of students attending this event.

In case of lockdown due to COVID, it is not possible to do an in person event and this activity will be cancelled.

** All the material designed during the intervention by ambassadors and researchers will be available in D3.2 Summary report on the SEEDS intervention implemented in each country.

5. INTERVENTIONS OF UNIVERSITY OF EXETER (UoE) (The UK)

The UK designed multi-purpose challenges for three behaviours; screen time, eat healthy snacks and drinks, and PA. There will be six activities with additional components. The frequency of these activities will be between one and five days a week throughout the six months of the intervention, which will begin in January and end in June. The monthly and weekly organization of the implementation of the activities is summarized in Figure 3.

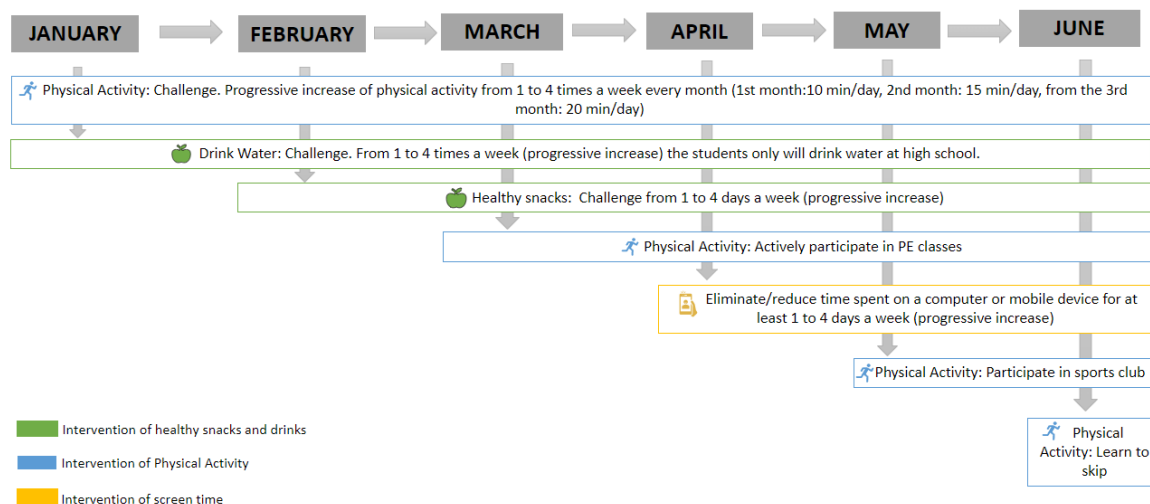


Figure 4: Outline of English interventions.

5.1. Month 1: Starting off simple

During this month, the idea is to get everyone used to the structure of the challenges, as well as develop an awareness of the sort of things we will ask them to do. We will start with two activities, one related to PA behaviour and the other of healthy snacks behaviour (specifically healthy drinks).

5.1.1. Get more active!

This activity is based on the launching of a challenge to increase progressively the PA, from ten to twenty minutes a day. This is an activity or exercise chosen by the participants themselves with the aim of increasing PA progressively over the six months of the intervention (from January to June). The challenge is to gradually increase the minutes of PA over the 4 weeks of the month. The first week adolescents will do 10 minutes of PA at least one day. The second week, they will do PA at least two days a week for 10 minutes. In the third week, they will do PA three days for 10 minutes. Finally, in the fourth week four days.

This activity has been developed taking into account COVID, so that, with the exclusion of some components – such as joining a sports club or participating in PE classes – everything can be achieved outside of school. For the adherence, researchers will be contacting the participants twice a month by email.

5.1.2. Drink water during the day

The water consumption activity aims to increase the consumption of water instead of other beverages so that adolescents are properly hydrated and do not abuse sugary drinks. It is a face-to-face and individual activity that lasts from 1 to 4 times a week from January to June. The activity consists in launching a series of challenges each week. The challenges are based on consuming water as a beverage exclusively during school hours for several days a week that increases progressively. The challenge will start with drinking water exclusively during school hours for one day in the first week of the month. The second week of the month, they will drink water exclusively for two days. In the third week, they will drink water exclusively for three days and the last week of the month for four days. In this way, the transition to a permanent habit will be easier.

In the middle of the month, we will assess the adherence with some questions addressed to adolescents. There will be questions related to PA such as *“You have now been participating in the program for two weeks. In your estimation, has your time being active: 1) Lessened, 2) Remained the same, or 3) Increased”, “How many days did you get more active over the last two weeks?” and “Roughly how much time was spent being active on the days you were active?”* On the other hand, there will be a question related to drinking water consumption *“can you recall how many days over the last two weeks you had water as your only drink during the school day?”*. The adherence will be monitored via the two emails we will be sending the participants each month. Researchers will be examining responses and making any necessary changes/communications based on this.

Finally, at the end of the month, participants have to view a video (see annex 5) and then, they have to answer some STEM questions such as, *“As a percentage, how much is the typical human made up of water?”, “How many liters of water does the average human loose per day?”, True or false – over hydration can damage health?”, “ What are some of the consequences of dehydration on the human body?” and “What is the recommended amount of water a human should consume? What factors affect this?*

5.2. Month 2: Adding a snack and increasing our activity

During this month the activity of increased PA and water consumption activity will continue. Although, with the addition of five minutes more to get active in PA activity. Moreover, a new activity on healthy snacks will begin this month.

5.2.1. Get more active!

This activity is based on the launching of a challenge to increase progressively the PA as explained above (section 3.1.1).

However, this month the adolescents have to do 5 minutes more of PA. The first week they will do 15 minutes of PA at least one day. The second week, they will do PA at least two days a week

for 15 minutes. In the third week, they will do PA three days for 15 minutes. Finally, in the fourth week four days.

5.2.2. Healthy eating

The healthy snack activity aims to encourage participants to eat healthy food. It is a behavioural change activity that will be carried out face-to-face on an individual basis. The frequency of this activity will be from one to four times a week and will be carried out both at school and at home. The healthy snacks intervention follows the same dynamics as the above activity, based on the launching of a series of challenges. In this way, adolescents will start consuming one healthy snack per week and will progressively increase their consumption each week and finally, they will consume four healthy snacks the last week of the month.

In the middle of the month, we will assess the adherence with some questions addressed to adolescents. The same questions will be asked about PA and water consumption. In addition, another question related to healthy snacks will be added, this will be “*Has your consumption of healthy snacks: 1) Lessened, 2) Remained the same, or 3) Increased?*”. The adherence will be monitored via the two emails we will be sending the participants each month. Researchers will be examining responses and making any necessary changes/communications based on this.

Finally, at the end of the month, participants have to view a video (see annex 5) and then, they have to answer some STEM questions such as, “*What is the definition of a calorie?*”, “*What is another term for ‘Basal Metabolic Rate’?*”, “*Why would you gain less energy from a 100-calorie serving of celery than you would potato crisps?*”, and “*Why can’t we always trust nutritional labels on the food we buy?*”.

5.3. Month 3: Participating in Physical Education classes

During this month the water consumption activity, healthy snacks activity and the PA activity will continue. Although, with the addition of five minutes more to get active in PA activity. Moreover, a new activity on active participation in Physical Education (PE) classes will be started.

5.3.1. Get more active!

This activity is based on the launching of a challenge to increase progressively the PA as explained above (section 3.1.1) However, this month the adolescents have to do 5 minutes more of PA regarding the month before. The first week they will do 20 minutes of PA at least one day. The second week, they will do PA at least two days a week for 20 minutes. In the third week, they will do PA three days for 20 minutes. Finally, in the fourth week four days.

5.3.2. Actively participate in PE classes

The second activity of the PA behaviour is the active participation in high school PE classes. This activity aims to get the participants really involved in the PE classes. In this way, they would increase PA within school hours. It is a behaviour change activity that will be carried out face-to-face on an grupal basis. This activity will run from March to June. This activity has been developed

taking into account COVID, so that, with the exclusion of some components – such as joining a sports club or participating in PE classes – everything can be achieved outside of school.

In the middle of the month, we will assess the adherence with some questions addressed to adolescents. The same questions will be asked about PA, water consumption and healthy snacking. In addition, another question related to active participation in PE will be added, such as *“What did you do in PE class where you actively participated?”*.

Finally, at the end of the month, participants have to view a video (see annex 5) and then, they have to answer some STEM questions such as, *“What are endorphins and what role do they play in exercise and our lives?”*, *“What are the additional benefits of playing a sport that you enjoy?”*, *“What is “The Growth Mindset” and why is it important?”*, *“Is failure always bad? Why?”* and, *“Do you believe you have already found a sport that you enjoy? Why?”*.

5.4. Month 4: Reducing screen time

During this month the water consumption activity, healthy snacks activity, active participation in PE classes activity, and increase PA activity will continue. Moreover, a new activity on reducing screen time will be started.

5.4.1. Get more active!

This activity is based on the launching of a challenge to increase progressively the PA as explained above (section 3.1.1). As of this month, the number of minutes of PA per day no longer increases. That is, the 20 min daily is maintained but the days that these 20 min PA is practised continue to increase every week, from 1 day per week to 4 days per week.

5.4.2. Reduce screen time

The activity of screen time of behaviour is based on a challenge, so it is an environmental change that will be carried out on an individual basis. The researchers will contact (by emailing) the participants to challenge them to try to reduce their screen time, that is the length of time that is spent using a mobile device or a computer screen. Each teenager will be free to choose the activities to do to replace screen time. The activity would start in April when the daylight hours increase and the days become longer. Thus, it will be easier to encourage them to do other activities. It doesn't have to be much each day, for example, an idea will be choosing to exchange looking at social media on your phone for reading a book. This activity follows the same dynamics as the above activities, based on the launching of a series of challenges. The first week of the month adolescents will have to start reducing time spent on a computer or mobile device for at least one day. The number of days that they will have to reduce the screen time will increase progressively each week. Finally, in the last week, they will have to reduce screen time by at least four days.

In the middle of the month, we will assess the adherence with some questions (by email) addressed to adolescents. The same questions will be asked about PA, water consumption, healthy snacks and, active participation in PE classes. In addition, another question related to reducing screen time will be added, such as *“Has the amount of time you have spent in front of a screen, either on a mobile device or a computer: 1) Lessened, 2) Remained the same, or 3) Increased?”*.

At the end of this month, adolescents will have not to answer any STEM questions like the previous instances. Instead, they will be invited to contact a member of the UK SEEDS team and ask them any questions about their research or career.

5.5. Month 5: Pick a new activity

During this month the activity of increased the PA, water consumption activity, healthy snacks activity, the activity of active participation in PE classes, and reduced screen time activity will continue. Moreover, a new activity will be started, this will be picking one new sporting activity to do each week.

5.5.1. Pick a new sporting activity

The third activity of the PA behaviour is participating in a sports club. This activity aims to get participants to engage in new sports clubs. It is a face-to-face group activity that can be done after school or a lunchtime club that is run by the PE department, it could be a new game that they propose, or it could be trying something new outside of school, such as squash. Continuing with the challenges, the researchers would encourage adolescents to participate in a new sports activity every week in May and June. In case of a lockdown of covid-19, the activity would be cancelled.

In the middle of the month, we will assess the adherence with some questions addressed to adolescents. The same questions will be asked about PA, water consumption, healthy snacks, active participation in PE classes and reduction of screen time. In addition, another question related to participation in some sports clubs will be added, such as *“What new activity have you participated in this month?”*.

Finally, at the end of the month, participants have to view a video (see annex 5) and then, they have to answer some STEM questions such as, *“What are the three main take home messages you learned from this video?”*, *“Is there anything that surprises you about this video?”*, and *“What is Ben’s main argument in this video?”*.

5.6. Month 6: Learn to skip

During this month the activity of increased the PA, water consumption activity, healthy snacks activity, the activity of active participation in PE classes, and reduced screen time activity will continue. Moreover, a new activity on learning to skip will begin this month.


5.6.1. Practice skipping

The fourth and final activity of the PA behaviour will be learning how to skip using a skipping rope. It is a face-to-face group or individual activity. The researchers will provide YouTube links so that teenagers can learn it themselves and will offer to go to schools to teach how to do it and provide the necessary material. In addition, the researchers will add the challenge of jumping rope for one minute in the next-to-last week of June and two minutes in the last week of June, so the teenagers will have to practice the previous weeks to achieve it. Researchers will plan a visit to each of the school and run an activity/participation day.


At the end of the month, we will assess the adherence with some questions addressed to adolescents. Researchers will be assessing via these questions and where necessary visiting schools to talk about the project if adherence drops off. The same questions will be asked about PA, water consumption, healthy snacks, active participation in PE classes, education of screen time, and participation in a sports club. In addition, another question related to learning how to skip using a skipping rope will be added, such as *“Were you able to skip for a solid two minutes by the end of this challenge?”*.


ANNEXES


Annex 1. Poster of healthy snacks (Spanish intervention)




This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 101006251








HEALTHY SNACKS




SANDWICHES

100% Brown bread...

- Tuna, lettuce and tomato
- Cheese
- Mozzarella and olives
- Hummus (original, with pepper, beetroot...)
- Guacamole with avocado, tomato and cheese
- Baby spinach, ricotta cheese and sliced tomato











- Grilled vegetables with tuna
- French omelette with any vegetable (pepper, aubergine, courgette, onion, garlic...)
- Boiled eggs with tomato and sliced olives
- Banana cream with grated coconut
- 100% peanut cream



OPTIONS WITH FRUIT

- Piece of seasonal fruit
- Seasonal fruit salad
- Fruit skewers with lemon juice or dipped in dark chocolate (75% cocoa)
- Banana, peanut butter and dark chocolate "bonbons" (75% cocoa)
- Apple chips with cinnamon



HEALTHY SNACKS

HEALTHY HOMEMADE RECIPES

Not all homemade recipes are healthy

- Avoid adding sugar
- Add naturally sweet foods to sweeten preparations such as apples, pears, dates.
- Use quality foods: wholemeal flours* of any kind, quality fats (extra virgin olive oil).
- *Gluten-free preparations: oatmeal, teff, rice, chickpeas, maize...



WE CAN ALSO INCLUDE...

NUTS



Not all nuts and dried fruits are healthy, so we must choose:

- Roasted or raw nuts
- In the format of creams containing nuts as the only ingredient (they can also be made at home).
- Almonds, hazelnuts, pistachios, walnuts, etc....
- **Avoid:** fried nuts with salt, sugar, honey or other extra additives.

MILK OR VEGETABLE-BASED BEVERAGES



- Individual milk or vegetable drink cartons with no added sugars
- Milk in reusable bottles
- Natural or vegetable yoghurts without added sugars
- *If we want to flavour the milk we can infuse it with lemon peel and a cinnamon stick or add cocoa powder...
- **Avoid:** Commercial milkshakes or chocolate milkshakes

Annex 2. Weekly and monthly plan (Spanish intervention)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 101006251

SEEDS

Weekly planner

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

PRIORITIES

TO DO

NOTE

IISPV⁹
INSTITUT D'INVESTIGACIÓ SANITÀRIA PERE VIRGILI

UNIVERSITY OF EXETER

ecsa | European Citizen Science Association

City of Rotterdam

ΧΑΡΟΚΟΠΕΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΗΡΑΚΛΕΙΟΥ
HAROKOPIO UNIVERSITY

Erasmus MC
University Medical Center Rotterdam

Erasmus





This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 101006251



Monthly plan YEAR: _____

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NOTE			

MY OBJECTIVES



TO DO



IMPORTANT!








Annex 3: Checklist screen time competition (Spanish intervention)

COMPETITION OF SCREEN TIME



STUDENTS	Week 1			Week 2			Week 3			Week 4		
	> / = 1h = 3pts	1h- 2h = 1 pt	<2h = 0 pts	> / = 1h = 3pts	1h- 2h = 1 pt	<2h = 0 pts	> / = 1h = 3pts	1h- 2h = 1 pt	<2h = 0 pts	> / = 1h = 3pts	1h- 2h = 1 pt	<2h = 0 pts
Student 1												
Student 2												
Student 3												
Student 4												
Student 5												
Student 6												
Student 7												
Student 8												
Student 9												
Student 10												
Student 11												
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Student 21												
Student 22												
Student 23												
Student 24												
Student 25												
Student 26												
Student 27												
Student 28												
Student 29												
Student 30												
TOTAL	=SUMA(B8:B37)	=SUMA(C8:C37)	=SUMA(D8:D37)	=SUMA(E8:E37)	=SUMA(F8:F37)	=SUMA(G8:G37)	=SUMA(H8:H37)	=SUMA(I8:I37)	=SUMA(J8:J37)	=SUMA(K8:K37)	=SUMA(L8:L37)	=SUMA(M8:M37)

Annex 5: United Kingdom six month intervention

Details of the SEEDS challenges

Month 1 – Starting off simple

For this month we are starting off simple! The idea is to get everyone used to the structure of the challenges, as well as develop an awareness of the sort of things you will be asked to do. You will notice that we ask you to 'get more active' – this can be anything you like. You could play a sport, run, jog, dance, swim – or even just walk. You can do this at any time you like – but the ambassadors suggested that **during the school day** is the best time. The idea is that you get active! How you do this is up to you...The 'drop in' activities will take you no longer than ten minutes.

Week 1. Get more active for at least **ten minutes** for at least **one day** this week. Make water your only drink during school time for at least **one day** this week.

Week 2. Get more active for at least **ten minutes** for at least **two days** this week. Make water your only drink during school time for at least **two days** this week. At the end of this week complete the 'drop in' activity.

Drop in activity.

Dear SEEDS participant, please begin by putting your unique identification code into the following box.

You have now been participating in the program for **two weeks**. In your estimation, has your time being active...

- 1) Lessened
- 2) Remained the same
- 3) Increased

If your active time has increased, please, to the best of your abilities, can you tell us...

How many days did you get more active over the last two weeks?

Roughly how much time was spent being active on the days you were active?

Finally, to the best of your ability, can you recall how many days over the last two weeks you had water as your only drink during the school day?

Week 3. Get more active for at least **ten minutes** for at least **three days** this week. Make water your only drink during school time for at least **three days** this week.

Week 4. Get more active for at least **ten minutes** for at least **four days** this week. Make water your only drink during school time for at least **four days** this week. At the end of this week complete the 'drop in' activity and STEM questions.

STEM Questions

Watch the following video -

https://www.youtube.com/watch?v=9iMGFqMmUFs&ab_channel=TED-Ed and answer the following questions...

- 1) As a percentage, how much is the typical human made up of water?
- 2) How many liters of water does the average human lose per day?
- 3) True or false – over hydration can damage health?
- 4) What are some of the consequences of dehydration on the human body?
- 5) What is the recommended amount of water a human should consume? What factors affect this?

Month 2 – Adding a snack and increasing our activity

Congratulations you are now starting the second month of the SEEDS experiment. The first month wasn't so bad! We are going to still be ramping things up this month – with the addition of **five minutes** more 'get active' time and opting for **heathy snacks**. Healthy snacks are things like, fruits and vegetables. If you have a question about healthy snacks please contact a member of the SEEDS team.

Week 1. Get more active for at least **fifteen minutes** for at least **one day** this week. Make water your only drink during school time for at least **one day** this week. Consume a heathy snack on at least **one** day this week.

Week 2. Get more active for at least **fifteen minutes** for at least **two days** this week. Make water your only drink during school time for at least **two days** this week. At the end of this week complete the 'drop in' activity. Consume a heathy snack on at least **two** days this week. At the end of this week complete the 'drop in' activity.

Drop in activity

Dear SEEDS participant, please begin by putting your unique identification code into the following box.

You have now been participating in the program for **six weeks**. In your estimation, has your time being active...

- 1) Lessened
- 2) Remained the same
- 3) Increased

If your active time has increased, please, to the best of your abilities, can you tell us...

How many days did you get more active over the last two weeks.

Roughly how much time was spent being active on the days you were active?

To the best of your ability, can you recall how many days over the last two weeks you had water as your only drink during the school day?

Finally, has your consumption of healthy snacks...

- 1) Lessened
- 2) Remained the same
- 3) Increased

Week 3. Get more active for at least **fifteen minutes** for at least **three days** this week. Make water your only drink during school time for at least **three days** this week. Consume a healthy snack on at least **three** days this week.

Week 4. Get more active for at least **fifteen minutes** for at least **four days** this week. Make water your only drink during school time for at least **four days** this week. At the end of this week complete the 'drop in' activity and STEM questions. Consume a healthy snack on at least **four** days this week. At the end of this week complete the 'drop in' activity and STEM questions.

STEM questions.

Watch the following video - https://www.youtube.com/watch?v=VEQaH4LruUo&ab_channel=TED-Ed and answer the following questions...

- 1) What is the definition of a calorie?
- 2) Which process releases calories from our food?
- 3) What is another term for 'Basal Metabolic Rate'?
- 4) Why would you gain less energy from a 100-calorie serving of celery than you would potato crisps?
- 5) Why can't we always trust nutritional labels on the food we buy?

Month 3 – Participating in PE classes

You are now 33% of the way through the SEEDS experiment! Well done! In addition to **five extra** minutes of 'get active' time, you will see that there is one major addition to the challenges this month – you are encouraged to **actively participate** in PE classes. Because you are all at different stages, and have different levels of engagement in PE, 'actively participate' will mean different things to different people. If you already try hard in PE, really attempt to push yourself – even harder than normal! If you find yourself at the side lines of activities in PE – really try to get

involved! Ideally everyone wants to be exercising vigorously so they feel out of breath and are sweating.

Week 1. Get more active for at least **twenty minutes** for at least **one day** this week. Make water your only drink during school time for at least **one day** this week. Consume a healthy snack on at least **one** day this week. Actively participate in all PE classes.

Week 2. Get more active for at least **twenty minutes** for at least **two days** this week. Make water your only drink during school time for at least **two days** this week. Consume a healthy snack on at least **two** days this week. Actively participate in all PE classes. At the end of this week complete the 'drop in' activity.

Drop in activity

Dear SEEDS participant, please begin by putting your unique identification code into the following box.

You have now been participating in the program for **ten weeks**. In your estimation, has your time being active...

- 1) Lessened
- 2) Remained the same
- 3) Increased

If your active time has increased, please, to the best of your abilities, can you tell us...

How many days did you get more active over the last two weeks.

Roughly how much time was spent being active on the days you were active?

To the best of your ability, can you recall how many days over the last two weeks you had water as your only drink during the school day?

Has your consumption of healthy snacks...

- 1) Lessened
- 2) Remained the same
- 3) Increased

Finally, what did you do in PE class where you actively participated?

Week 3. Get more active for at least **twenty minutes** for at least **three days** this week. Make water your only drink during school time for at least **three days** this week. Consume a healthy snack on at least **three** days this week. Actively participate in all PE classes.

Week 4. Get more active for at least **twenty minutes** for at least **four days** this week. Make water your only drink during school time for at least **four days** this week. At the end of this week complete the 'drop in' activity and STEM questions. Consume a healthy snack on at least **four**

days this week. Actively participate in all PE classes. At the end of this week complete the 'drop in' activity and STEM questions.

STEM questions

Watch the following video -

https://www.youtube.com/watch?v=hmFQqjMF_f0&ab_channel=TED-Ed answer the following questions...

- 1) What are endorphins and what role do they play in exercise and our lives?
- 2) What are the additional benefits of playing a sport that you enjoy?
- 3) What is "The Growth Mindset" and why is it important?
- 4) Is failure always bad? Why?
- 5) Do you believe you have already found a sport that you enjoy? Why?

Month 4 – Reducing screen time

You should really be getting into the swing of things now! We have now reached the halfway point in the SEEDS experiment and for this month we are going to keep things mostly the same – but there will be one small difference. We are going to try and **reduce** our screen time – the length of time that is spent using a mobile device or a computer screen. Spring is in full bloom and you can now start to make the most of the longer days by trying to reduce our screen time. It doesn't have to be much each day – but choosing to exchange looking at social media on your phone for reading a book would be a fantastic start!

Week 1. Get more active for at least **twenty minutes** for at least **one day** this week. Make water your only drink during school time for at least **one day** this week. Consume a healthy snack on at least **one** day this week. Actively participate in all PE classes. Eliminate/reduce time spent on a computer or mobile device for at least **one** day.

Week 2. Get more active for at least **twenty minutes** for at least **two days** this week. Make water your only drink during school time for at least **two days** this week. At the end of this week complete the 'drop in' activity. Consume a healthy snack on at least **two** days this week. Actively participate in all PE classes. Eliminate/reduce time spent on a computer or mobile device for at least **two** days. At the end of this week complete the 'drop in' activity.

Drop in activity

Dear SEEDS participant, please begin by putting your unique identification code into the following box.

You have now been participating in the program for **fourteen weeks**. In your estimation, has your time being active...

- 1) Lessened

- 2) Remained the same
- 3) Increased

If your active time has increased, please, to the best of your abilities, can you tell us...

How many days did you get more active over the last two weeks.

Roughly how much time was spent being active on the days you were active?

To the best of your ability, can you recall how many days over the last two weeks you had water as your only drink during the school day?

What did you do in PE class where you actively participated?

Has your consumption of healthy snacks...

- 1) Lessened
- 2) Remained the same
- 3) Increased

Finally, has the amount of time you have spent in front of a screen, either on a mobile device or a computer...

- 1) Lessened
- 2) Remained the same
- 3) Increased

Week 3. Get more active for at least **twenty minutes** for at least **three days** this week. Make water your only drink during school time for at least **three days** this week. Consume a healthy snack on at least **three** days this week. Actively participate in all PE classes. Eliminate/reduce time spent on a computer or mobile device for at least **three** days.

Week 4. Get more active for at least **twenty minutes** for at least **four days** this week. Make water your only drink during school time for at least **four days** this week. At the end of this week complete the 'drop in' activity and STEM questions. Consume a healthy snack on at least **four** days this week. Actively participate in all PE classes. Eliminate/reduce time spent on a computer or mobile device for at least **four** days. At the end of this week complete the 'drop in' activity and STEM question/task.

STEM task

This month you aren't going to be answering any questions like the previous instances. Instead, you are invited to contact a member of the UK SEEDS team and ask them any question that you like about their research. Here are the links to each member's profile – which contains their email address.

Chris - https://sshs.exeter.ac.uk/staff/profile/index.php?web_id=Christopher_Elphick

Craig – http://sshs.exeter.ac.uk/staff/profile/index.php?web_id=Craig_Williams

Dimitris - http://sshs.exeter.ac.uk/staff/profile/index.php?web_id=Dimitris_Vlachopoulos

Your task is to pick one of them, have a read through their online profile and then ask them a question about their research or career. For example, if you look at Dr. Elphick's profile you will notice he is a trained teacher! Perhaps you could ask him why he decided to leave teaching? Or what he enjoys about his job at the university? Perhaps who his favorite scientist is?

Month 5 – Pick a new activity

This challenge will be the 'calm before the storm' and to prepare you, this is essentially the same as last month – **but with the addition of you picking one new thing to do**. In this challenge we encourage you to participate in one new sporting activity each week! So please, try something new! It could be an after school or a lunchtime club that is ran by the PE department, it could be a new game that you invent, or it could be trying something new outside of school – such as squash.

Week 1. Get more active for at least **twenty minutes** for at least **one day** this week. Make water your only drink during school time for at least **one day** this week. Consume a healthy snack on at least **one** day this week. Actively participate in all PE classes. Eliminate/reduce time spent on a computer or mobile device for at least **one** day. **Participate in at least one new sporting activity this week – such as an afternoon or lunchtime club.**

Week 2. Get more active for at least **twenty minutes** for at least **two days** this week. Make water your only drink during school time for at least **two days** this week. At the end of this week complete the 'drop in' activity. Consume a healthy snack on at least **two** days this week. Actively participate in all PE classes. Eliminate/reduce time spent on a computer or mobile device for at least **two** days. **Participate in at least one new sporting activity this week – such as an afternoon or lunchtime club.** At the end of this week complete the 'drop in' activity.

Drop in activity.

Dear SEEDS participant, please begin by putting your unique identification code into the following box.

You have now been participating in the program for **eighteen weeks**. In your estimation, has your time being active...

- 1) Lessened
- 2) Remained the same
- 3) Increased

If your active time has increased, please, to the best of your abilities, can you tell us...

How many days did you get more active over the last two weeks.

Roughly how much time was spent being active on the days you were active?

To the best of your ability, can you recall how many days over the last two weeks you had water as your only drink during the school day?

What did you do in PE class where you actively participated?

Has your consumption of healthy snacks...

- 1) Lessened
- 2) Remained the same
- 3) Increased

Has the amount of time you have spent in front of a screen, either on a mobile device or a computer...

- 1) Lessened
- 2) Remained the same
- 3) Increased

Finally, what new activity have you participated in this month?

Week 3. Get more active for at least **twenty minutes** for at least **three days** this week. Make water your only drink during school time for at least **three days** this week. Consume a healthy snack on at least **three** days this week. Actively participate in all PE classes. Eliminate/reduce time spent on a computer or mobile device for at least **three** days. **Participate in at least one new sporting activity this week – such as an afternoon or lunchtime club.**

Week 4. Get more active for at least **twenty minutes** for at least **four days** this week. Make water your only drink during school time for at least **four days** this week. At the end of this week complete the 'drop in' activity and STEM questions. Consume a healthy snack on at least **four** days this week. Actively participate in all PE classes. Eliminate/reduce time spent on a computer or mobile device for at least **four** days. **Participate in at least one new sporting activity this week – such as an afternoon or lunchtime club.** At the end of this week complete the 'drop in' activity and STEM question/task.

STEM questions

Watch the following video - https://www.youtube.com/watch?v=tqNhqX7-Vi8&ab_channel=TEDxTalks and answer the following questions...

What are the three main take home messages you learned from this video?

Is there anything that surprises you about this video?

What is Ben's main argument in this video?

Month 6 – Learn to skip

We are saving the best challenge for last – during this month you are going to learn how to skip using a skipping rope. You can pick any tutorial you like to help you learn how to do this, and Dr. Elphick is more than happy to visit your school to teach you too – but here is an excellent one to get you started...

https://www.youtube.com/watch?v=k1JaZBz8VeQ&ab_channel=WODprep

You will be provided with a skipping rope by a member of the SEEDS team and they will help you get comfortable using it. Remember if you have got this far you have done an amazing job! This is your final challenge, so give it all you have and remember to have fun. The 'drop in' activity will only feature at the end of the month.

Week 1. Get more active for at least **twenty minutes** for at least **one day** this week. Make water your only drink during school time for at least **one day** this week. Consume a healthy snack on at least **one** day this week. Actively participate in all PE classes. Eliminate/reduce time spent on a computer or mobile device for at least **one day**. **Participate in at least one new sporting activity this week – such as an afternoon or lunchtime club.** Watch tutorial video on how to use a skipping rope and begin to practice skipping either at school or at home.

Week 2. Get more active for at least **twenty minutes** for at least **two days** this week. Make water your only drink during school time for at least **two days** this week. At the end of this week complete the 'drop in' activity. Consume a healthy snack on at least **two** days this week. Actively participate in all PE classes. Eliminate/reduce time spent on a computer or mobile device for at least **two** days. **Participate in at least one new sporting activity this week – such as an afternoon or lunchtime club.** Continue to practice skipping either at school or at home.

Week 3. Get more active for at least **twenty minutes** for at least **three days** this week. Make water your only drink during school time for at least **three days** this week. Consume a healthy snack on at least **three** days this week. Actively participate in all PE classes. Eliminate/reduce time spent on a computer or mobile device for at least **three** days. **Participate in at least one new sporting activity this week – such as an afternoon or lunchtime club.** Skip for one minute with no breaks either at school or at home.

Week 4. Get more active for at least **twenty minutes** for at least **four days** this week. Make water your only drink during school time for at least **four days** this week. At the end of this week complete the 'drop in' activity and STEM questions. Consume a healthy snack on at least **four** days this week. Actively participate in all PE classes. Eliminate/reduce time spent on a computer or mobile device for at least **four** days. **Participate in at least one new sporting activity this week – such as an afternoon or lunchtime club.** Skip for two minutes with no breaks either at school or at home. At the end of this week complete the 'drop in' activity and STEM question/task.

Congratulations!

You have now completed the SEEDS intervention! You have been busy over the last six months, and you have done some amazing things! Well done. This is a world first.

A member of the SEEDS team will be in touch regarding the next phase, but for the time being, sit back and relax for a while. However, I want you to remember all of the things that you have learned and accomplished over the last six months.

Drop in activity

Dear SEEDS participant, please begin by putting your unique identification code into the following box.

You have now been participating in the program for **fourteen weeks**. In your estimation, has your time being active...

- 1) Lessened
- 2) Remained the same
- 3) Increased

If your active time has increased, please, to the best of your abilities, can you tell us...

How many days did you get more active over the last two weeks.

Roughly how much time was spent being active on the days you were active?

To the best of your ability, can you recall how many days over the last two weeks you had water as your only drink during the school day?

What did you do in PE class where you actively participated?

Has your consumption of healthy snacks...

- 1) Lessened
- 2) Remained the same
- 3) Increased

Has the amount of time you have spent in front of a screen, either on a mobile device or a computer...

- 1) Lessened
- 2) Remained the same
- 3) Increased

Finally – were you able to skip for a solid two minutes by the end of this challenge?