Adolescent Health Literacy Demonstration Project

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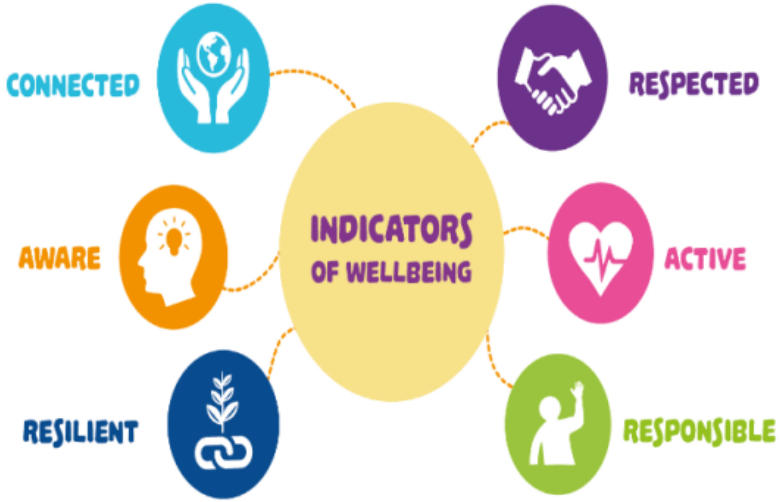


Context

Five post-primary schools

12-16-year old's (Junior-Cycle)

Low-socioeconomic

Curriculum change

Research Questions/Objectives

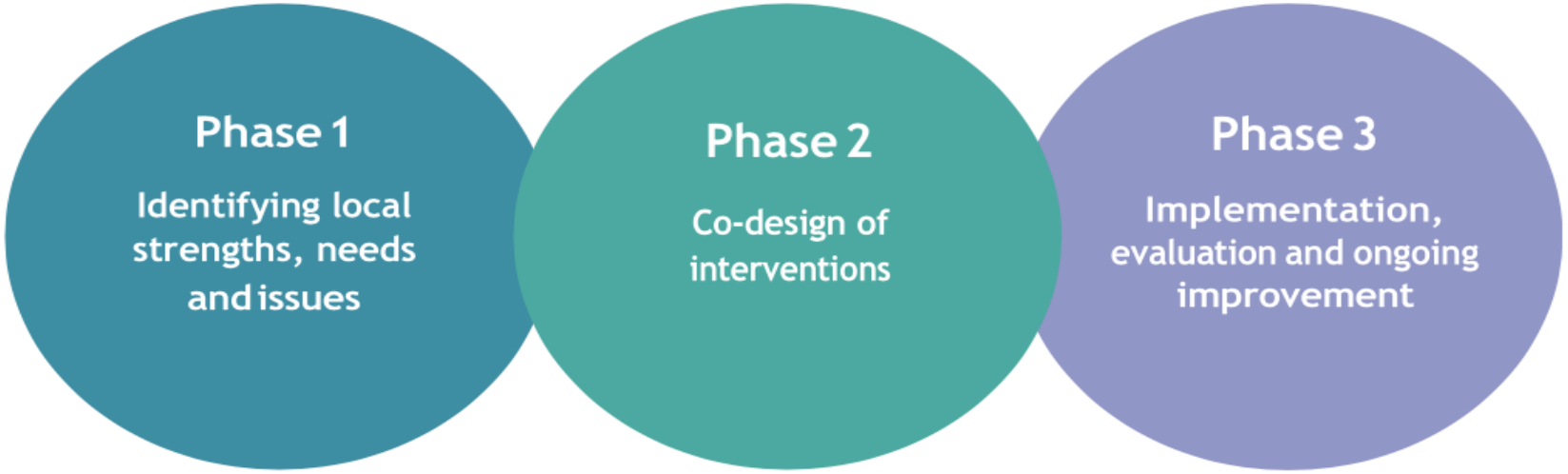
To explore the health knowledge and understanding strengths and needs of adolescents in this context

To co-design with all relevant stakeholders a practical and sustainable school-based health literacy intervention

To determine the acceptability of the various components of the intervention from a student and teacher's perspective, and to iteratively refine the intervention based on this

To determine the impact of the intervention on i) adolescents' knowledge and understanding around health, and ii) on actual health behaviours of adolescents

Ophelia (OPtimising HEalth LIterAcy) Framework



Steps for each phase

Step 1: Project set-up

Step 2: Data collection and extraction

Step 3: Co-design workshops

Step 4: Intervention design (program logic models)

Step 5: Intervention planning (implementation and evaluation plans developed)

Step 6: Intervention refinement (quality cycles to test processes and materials)

Step 7: Implementation and evaluation activities

Step 8: Development of an ongoing quality improvement strategy

(Batterham et al., 2014; Beauchamp et al., 2017)

March 2018- Oct 2019

Phase 1

- Vignette development
- Co-design workshops

Nov 2019- Aug 2021

Phase 2

- Expert consultation
- Literature review
- Intervention development
- Q.I.C

Sept 2021- May 2022

Phase 3

- Intervention implementation
- Process evaluation

October 2022-

Future Development

- Evaluation
- Refinement
- Upscale and dissemination?

Phase 1 (Identifying local strengths, needs and issues)

- Vignette Development
- Co-Design Workshops

1. Lifestyle behaviors	2. Information on risky behaviours	3. Information on positive behaviours	4. Health Information from media	5. Social support	6. Understanding health information	7. Effect of lifestyle on health	8. Appraisal of health information
5.81	3.35	3.46	5.55	3.37	2.12	4.73	1.96

Brief Descriptive overview from cluster analysis:

Cluster 3 included 187 students and was evenly distributed for gender. Scores for lifestyle behaviours, information on risky behaviours, information on positive behaviours and understanding health information were second lowest of all clusters. Scores for information from media sources were second highest of all clusters. Physical activity levels among participants in this cluster were also second lowest of all clusters with an average of 60 minutes of physical activity on 3.47 days per week.

Phase 1 (Identifying local strengths, needs and issues)

- Vignette Development
- Co-Design Workshops

Emma is 14. Emma believes that if you want to be healthy and happy with yourself, you need friends to talk to. Her favourite thing to do is go out with the girls. They love going for food and looking around the shops. It's good because without even realizing it, they actually walk a lot.

Emma loves it when all her friends come around to her house because her Mam always order Dominos for them, and then they can go to McDonalds for a McFlurry after. Emma knows that if your parents are working all day and they're coming home late, they're wrecked so they don't always have time to cook. She doesn't mind, she loves pizza and ice cream. She loved the chipper around the corner where they used to live, but they had to move house and her Dad won't drive to get it after he's had a drink in the evening.

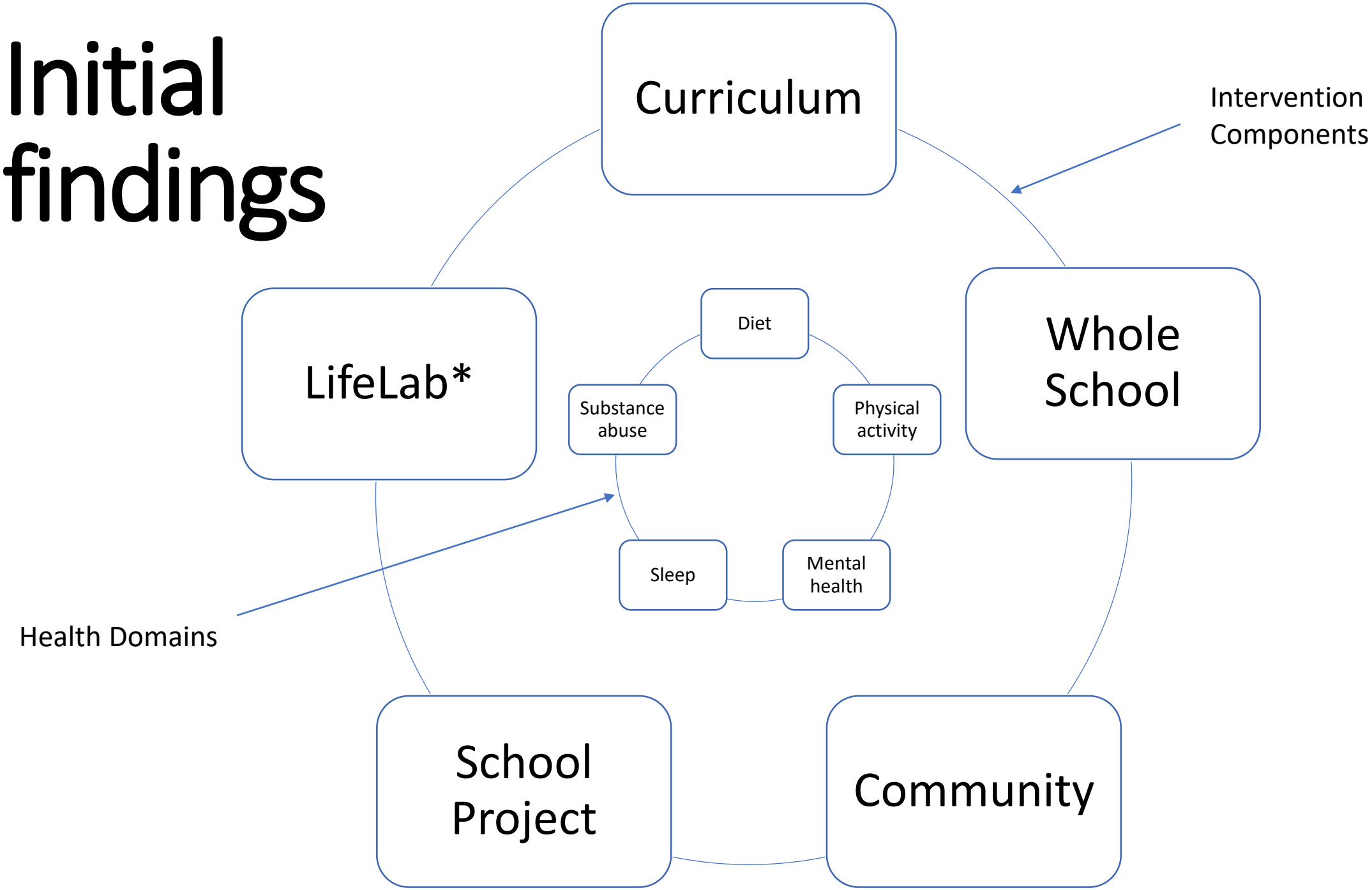
Emma's favourite thing to do is go out with the girls...going for food and walking around the shops

Her Mam always orders Dominos... then they go to McDonalds for a McFlurry

Emma is addicted to her phone

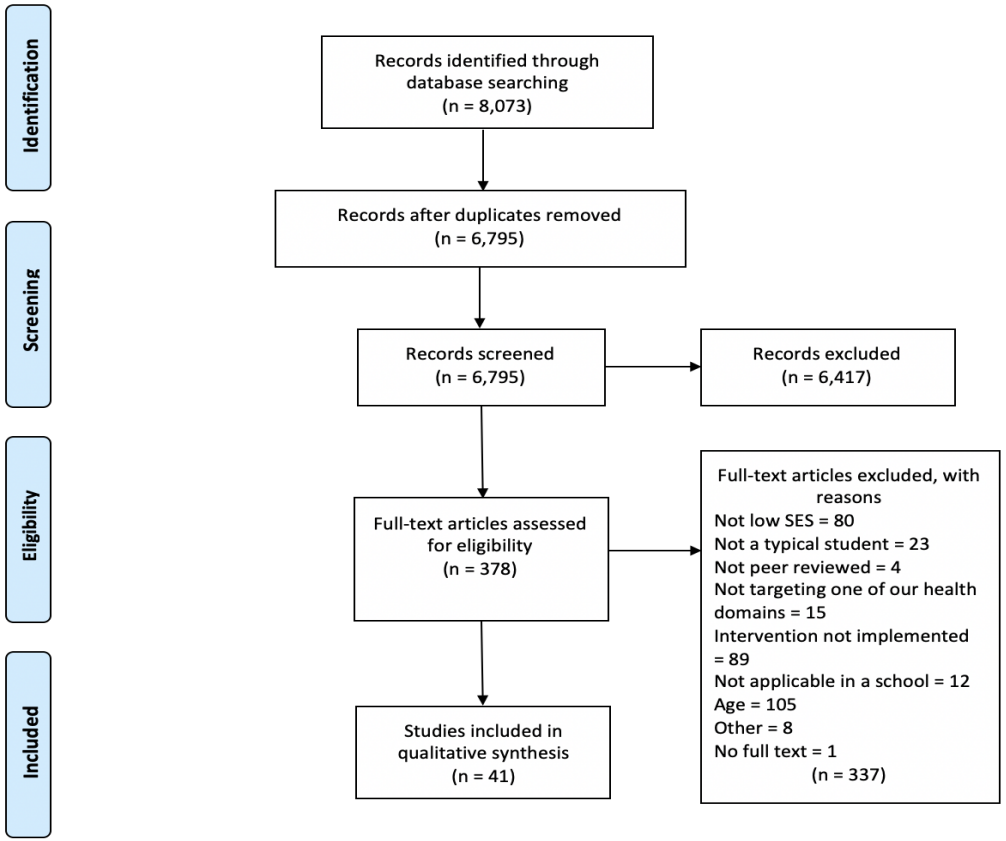
Emma thinks she's overweight compared to other people

Initial findings



Phase 2
(Co-design of intervention)

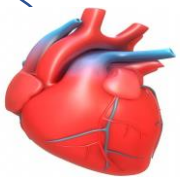
- Systematic Review
- Expert Consultation
- Intervention Development



Stand-Out Findings (Preliminary)

- The wide range of topics we are aiming to cover in our intervention - 5 health domains compared to the one or two covered in most interventions
- Lack of studies carried out in the UK & Ireland (and even Europe)
- Lack of interventions targeting sleep
- The high number of PA and Diet interventions
- No studies focused explicitly on HL

LifeLab Overview



(Sarah/Dylan)

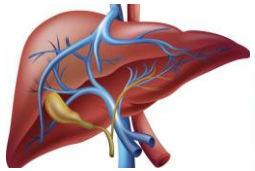
Physical Inactivity

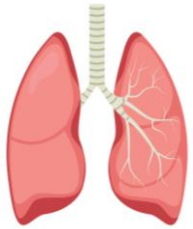
(Sarah/Dylan)

Diet

Smoking/vaping

Social Media





(Luke/Lauren)

(Jay/Lauren/Emma)

Body Image

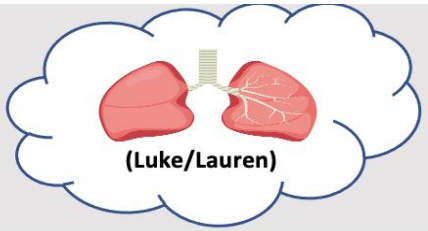
(Ryan/Amy/Luke)

Mental Health/
Self-management

Alcohol

Sleep

Individual Station Example



Key Learning from Station

- The impact of smoking and vaping on the lungs
- How these behaviors impact appearance
- How e-cigarette companies are targeting youths

Prerequisite Learning in the School

- The function and importance of the lungs
- How smoking/vaping can damage the lungs
- Vignettes introduced and used to highlight lifestyle issues

1. Station Introduction

- Station explained to students
- Recap on school-based learning

Tech Solutions: *Short custom-made videos*

2. Vignette Discussion

- Major issues with vignettes lifestyle are highlighted e.g. Luke/Lauren – Smoking/Vaping.
- Students keep these issues in mind while completing each section

Tech Solutions*: Short videos of vignette to highlight lifestyle issues we want to explore at station – rather than story boards – more engaging*

3a. Lung capacity test

Task:

- Students carry out the lung function test and compare their score to the vignette's/chronic smokers.
- Normative values will be displayed on a chart/graph

Key Learning:

- How poor lifestyle behaviors (smoking) decreases the lung's ability to function

Tech Solutions:

- *While carrying out the test, students can see what is happening within the lungs on a screen (e.g. the lungs fill and expand as they inhale) – will make the test easier to carry out and a more tangible experience.*

3b. Straw exercise test – Mimic COPD

Task:

- Students complete a short burst of exercise with a straw in their mouth and nose clip on, mimicking how it feels to have COPD. They then carry out the same exercise test with no restrictions to compare the difference.

Key Learning:

- How damaging your lungs limits your ability to exercise and to carry out daily activities

Tech Solutions:

- Fun exergame. Short 30 second game on an Xbox Kinect. Carry out game with and without straw/nose clip. Compare scores achieved and difficulty experienced.

3c. Ingredients of an (e)-cigarette

Task:

- Students observe on a poster the ingredients contained within both forms of cigarettes, and the alternative uses for the chemicals (e.g. Ammonia – toilet cleaner)
- Samples of products would be in front of them

Key Learning:

- The harmful chemicals contained in both cigarettes and e-cigarettes

Tech Solutions:

- Touchscreen to allow students to open the (e)-cigarette and look at the various harmful chemicals and the alternative uses for these.

3d. Smoker Face App – Appearance

Task:

- Students use the face morphing app to see what they might look like in years to come if they were to smoke.

Key Learning:

- How smoking can impact your appearance

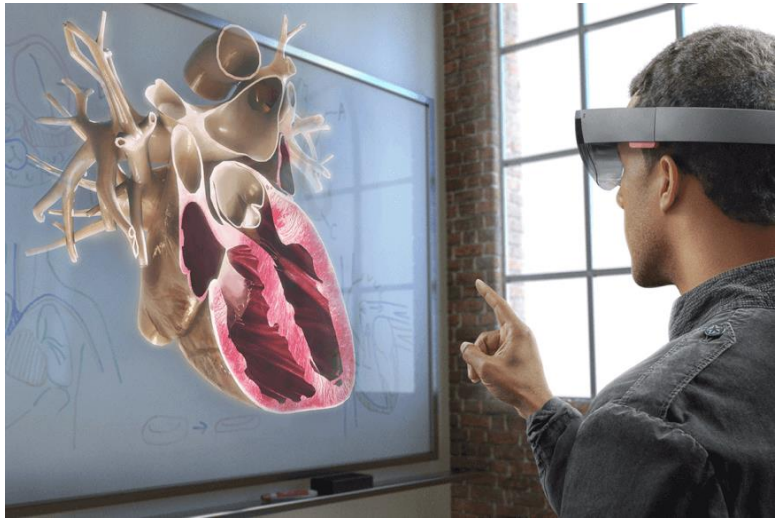
3e. Marketing strategies of e-cigarette companies

Task:

- Students look at vape adverts and highlight the major issues associated – i.e. Flavors, colorful packaging, celebrity endorsement etc.

Key Learning:

- Highlight that youths are being targeted and the dangers associated



Next Steps

- Continue developing ideas and content for the LifeLab intervention
- Physically assemble the lab experience (individual lab stations and furnish the space)
- Trial the experience with the schools
- Evaluate the acceptability and effectiveness of the intervention from the student and teacher's perspectives, and to inform future LifeLab stations/activities.
- Iteratively refine the lab experience in order to develop a sustainable intervention for rollout.

Potential Issues (advice welcomed)

- Interactive solutions to educate adolescents on health behaviors
- Major health issues that could be targeted within LifeLab
- Technology ideas that could be incorporated into the design
- Best approaches to take when tackling sensitive topics (eg. body weight/composition)
- Trialing lab stations with schools during COVID-19

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References

- Beauchamp, A., Batterham, R. W., Dodson, S., Astbury, B., Elsworth, G. R., McPhee, C., Jacobson, J., Buchbinder, R., & Osborne, R. H. (2017). Systematic development and implementation of interventions to OPtimise Health Literacy and Access (Ophelia). *BMC Public Health*, *17*(1), 230. https://doi.org/10.1186/s12889-017-4147-5
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