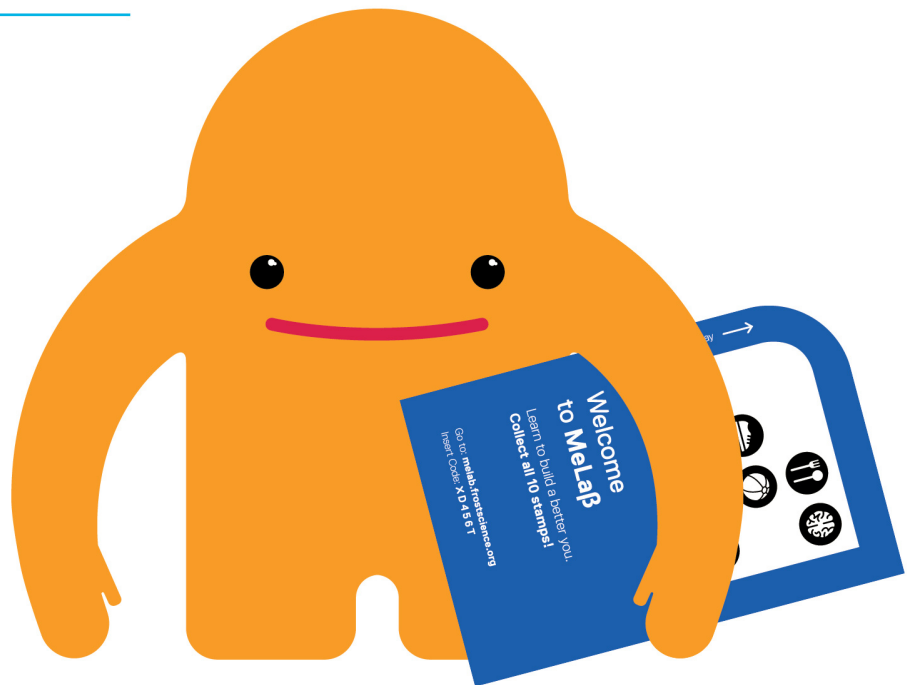




MeLaß

Grades 3-5



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Questions? Ready to book your field trip? | Please visit: www.frostsscience.org/fieldtrips



Overview

The **MeLaß** exhibition is an educational health and wellness experience where students can learn about the effects of their everyday choices on their mental and physical health. Focusing on the power of decision-making and goal setting, **MeLaß** allows each visitor to become the experiment through simulations that explore different outcomes, all while encouraging higher health awareness and improved conscious choices.

Educational Standards

3rd Grade

Science Big Idea 1 - The Practice of Science

- SC.3.N.1.1 Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.

Health Education Big Idea 5 - Decision Making

- HE.3.B.5.2 List healthy options to health-related issues or problems.

4th Grade

Science Big Idea 17 - Interdependence

- SC.4.L.17.2 Explain that animals, including humans, cannot make their own food and that when animals eat plants or other animals, the energy stored in the food source is passed to them.

Health Education Big Idea 1 - Core Concepts

- HE.4.C.1.2 Identify examples of mental/emotional, physical, and social health.

5th Grade

Science Big Idea 14 - Organization and Development of Living Organisms

- SC.5.L.14.1 Identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton, reproductive organs, kidneys, bladder, and sensory organs.

Health Education Big Idea 1 - Core Concepts

- HE.5.C.1.6 Explain how human body parts and organs work together in healthy body systems, including the endocrine and reproductive systems.

Health Education Big Idea 5 - Decision Making

- HE.5.B.5.3 Compare the potential short-term impact of each option on self and others when making a health-related decision.

Background Information

MeLaß visitors get to investigate their everyday choices through five zones (Eat, Move, Relax, Connect and Learn) that offer the latest health science and demonstrate the interrelated effects of their everyday lifestyle choices and activities. Each exhibit zone reveals how the body and mind function together, highlights related current research, showcases innovative medical technology, and shares what science has to say about the different outcomes due to changes in behavior. Students will be welcomed into a lively and vibrant space by a trained **MeLaß** facilitator, and will be able to explore together with their co-investigator, β eta, a digital character they get to personalize as they collect activity stamps and complete challenges in each zone.

The **MeLaß** zones:

- EAT:** Food is fuel for our bodies and our brains. Our digestive systems break down the food we eat into energy and nutrients. Our diets are influenced by external and internal factors including our emotions, social surroundings and physical environment.
- MOVE:** Our bodies need daily movement. Exercising regularly can have multiple physical and mental benefits including a stronger heart, a reduced risk of heart disease, and improved sleep and mood.
- RELAX:** Adults and children all experience different types of stress and have different ways to release that stress. Constant and unmanaged stress can have physical and mental health effects. Getting an appropriate amount of sleep is one way that each of us can adopt to let our bodies rest and recover.
- CONNECT:** Social connections are important, and the lack of social interaction and strong personal bonds can have negative effects on our physical and mental health. Technology has increased opportunities for us to connect, allowing ideas – but also disease – to spread further and faster than ever before.
- LEARN:** The connections in our brains are continuously shaped by our choices and experiences. Our daily behavior around diet, exercise, stress management and social interactions all impact our brain health.

MeLaß Exhibition Key Questions

- What choices do you make every day that affect your health and happiness?
- What factors in your social and physical environment influence your choices?
- What choices or activities do you think you could change to feel healthier and happier?

Pre-Activity

See pages 5 - 7 for pre-activity instructions and presentation.

Field Trip Experience

All Museum field trips are a three-hour experience, offered Monday through Friday, beginning at 9:30 a.m. or 10:00 a.m. Each field trip includes three experiences of the teacher's choice and time for lunch. Upon arrival, the teacher will be provided with a specific schedule for his/her visit based on the three chosen experiences. Additional information regarding field trip logistics is provided in the field trip package that each teacher will receive upon booking of a field trip. For **MeLaß**, all students will receive a **MeLaß** activity card before entering the exhibition. This card is a central part of the exhibition experience. Teachers and chaperones will be provided with a **MeLaß** instructional guide (please see page 18).

During the field trip, students will encounter a variety of experiences. To enhance these learning opportunities, facilitator cards are provided at arrival for all teachers and chaperones who would like to use them (please see pages 19 - 23 for a sample). The facilitator cards include prompting questions, additional content, and exhibition location maps which show where in the exhibition one can find content related to that card.

Post-Activity

See pages 8 - 17 for post-activity instructions and presentation.

Select Recommended Extensions:

Grade 3: Kick the Can Man

<http://www.cpalms.org/Public/PreviewResourceLesson/Preview/70199>

Grade 4: Physical and Chemical Changes in the Digestion Process

<http://www.cpalms.org/Public/PreviewResourceLesson/Preview/35644>

Grade 5: Body Swatter

<http://www.cpalms.org/Public/PreviewResourceLesson/Preview/40672>

Pre- and Post-Field Trip Resources

Pre-Field Trip Activity: Chalk Talk (A Visual Thinking Routine)

Overview

Students will participate in an activity to encourage discussions around the multitude of decisions made every day in regards to our lives and our health. In Chalk Talk, students silently brainstorm how one of the five topics that are present throughout the **MeLaß** exhibit (Eat, Move, Relax, Connect, and Learn) relates to them, their lifestyles, and the choices they make. They make connections by linking ideas, exploring others' comments, as well as through group sharing and discussions.

Objective

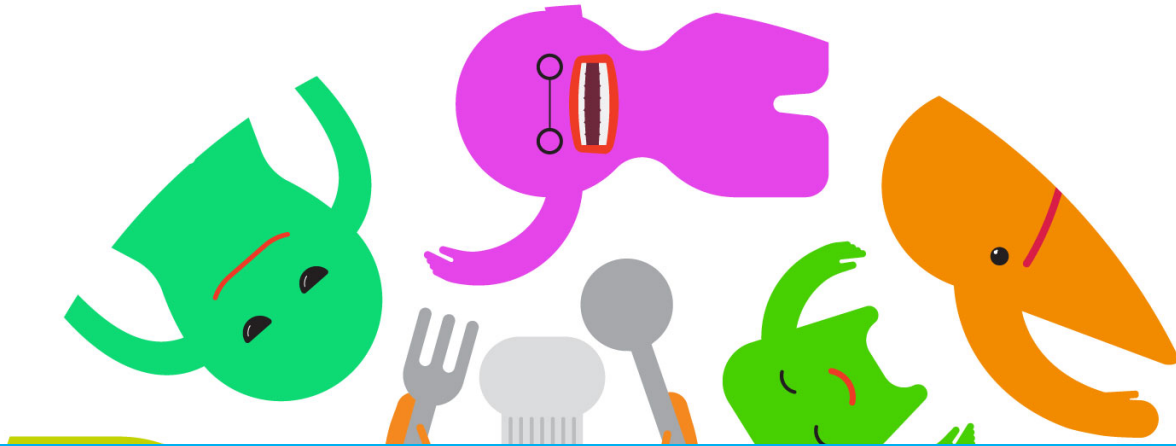
Students will brainstorm and be more aware of the decisions they make every day related to their health and wellbeing.

Materials

- Five pieces of poster paper (one for each zone)
- Writing utensils – pencils, markers, etc.
- **MeLaß** Grades 3-5 Post-Field Trip Sample Chart (pages 6 - 7)

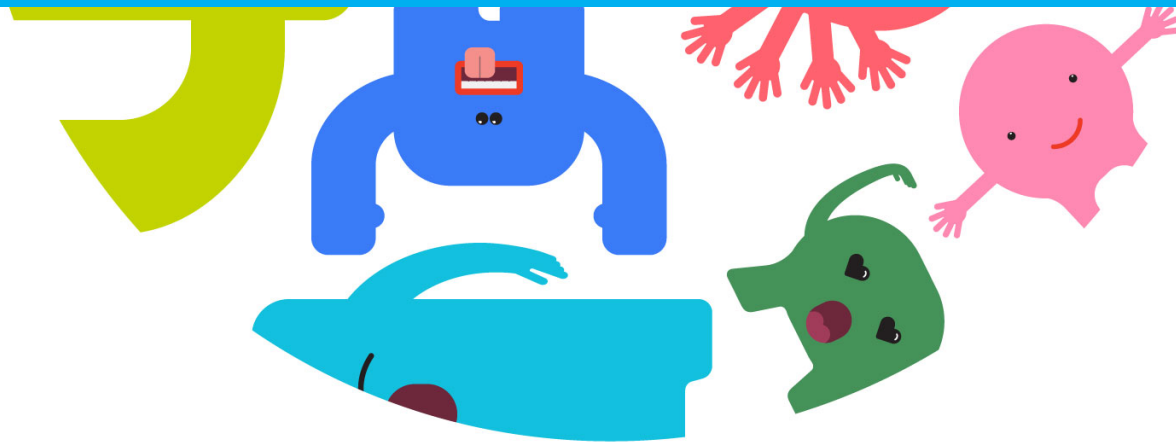
Activity Steps

1. Divide your class into five groups.
2. Write one of following words on a piece of poster paper: Eat, Move, Relax, Connect, or Learn.
3. Assign each group a word (Eat, Move, Relax, Connect, or Learn) by handing the group one of the poster papers.
4. Ask the class, "What comes to mind when you think about the topic on your poster paper?"
5. Instruct students to add their thoughts and comments to the poster paper and remind them that this is a silent activity. Tell them that they can comment on other group members' thoughts by circling the idea, writing their own comment near it, and then connecting back to it with a line. Please see a sample chart for "Eat" on page 7 for reference.
6. Pass out the writing utensils and let the students begin.
7. As the facilitator, feel free to add your own comments or questions, link ideas together, or circle ideas to invite further reflection to each group's Chalk Talk.
8. Conclude with each group summarizing and presenting their completed Chalk Talk to the class. If there is enough time, have the groups contemplate the each other's Chalk Talks and add their own comments. When completed, invite further reflection by asking, "Do you notice any similarities or differences between the topics?"



Frost Science | MeLaß Pre-Field Trip Activity | 3RD - 5TH Grade

CHALK TALK



Sample Pre-Field Trip Chalk Talk



Pre- and Post-Field Trip Resources

Post-Field Trip Activity: SMART Goal Setting

Overview:

After the field trip, students reflect on what they explored and spotlight the **MeLaß** goal they selected for themselves at the end of their visit, or create their own goal. This activity can be used to reinforce the concepts in each **MeLaß** zone as well as help students learn about the process of setting, monitoring, and achieving goals.

Objective:

Students will identify a goal related to their health and wellness and determine the decisions and steps needed to achieve that goal through the use of the acronym SMART (Specific, Measurable, Attainable, Relevant and Timely).

Materials:

- Computer, white board and projector
- Notebook paper for each student or printed student worksheet
- Writing utensils: pencils, markers, etc.
- **MeLaß** Grades 3-5 Post-Field Trip Presentation (pages 10 - 17)

Activity Steps:

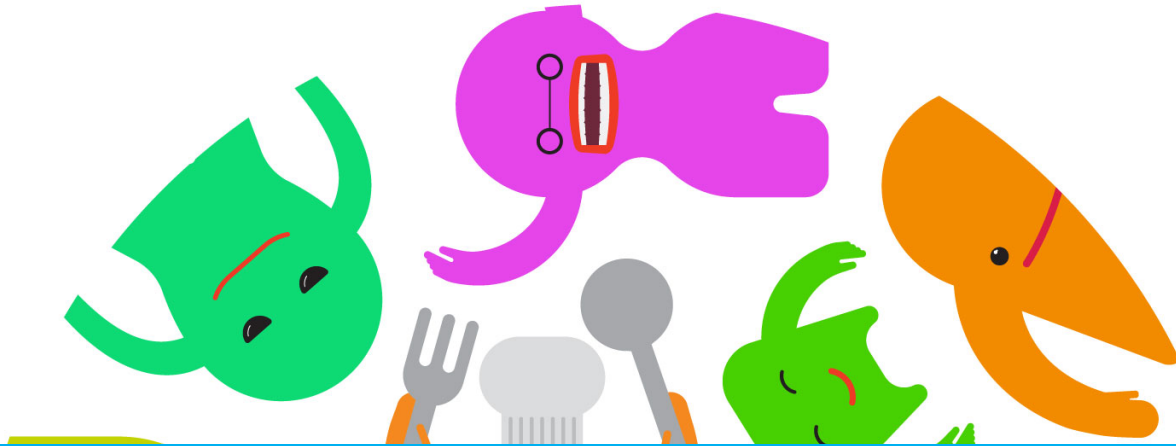
1. Test the presentation on your computer: open the document, go to "View" on the menu bar, then click the full screen option ("Enter Full Screen" or "Full Screen Mode").
2. Use the presentation to guide the activity.
3. Review the SMART acronym with students using the presentation.
4. Review the **MeLaß** goals with the students and ask them to pick one and write it on their worksheet (page 16) under "Specific." Then continue with the presentation so they can fill in the other boxes.
5. Conclude with a class discussion about goals.

Helpful Information

- Setting goals is important for developing daily habits!
- Make your goals realistic and achievable.
- Goals can be more fun and easier to achieve with a partner. Ask a friend or family member to join.
- You can apply goal setting to many aspects of your life to boost your life satisfaction.

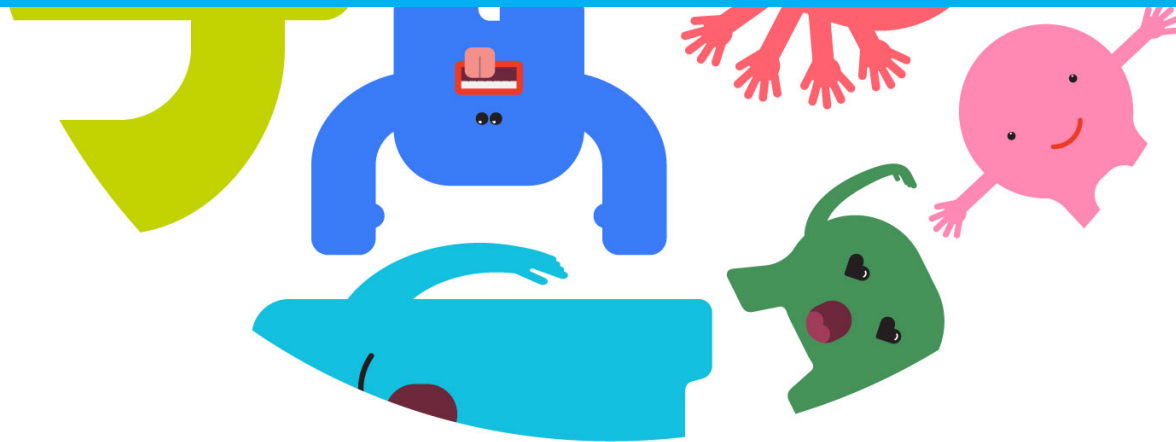
Optional Extensions

1. If the school media lab is available, or if you have access to computers in your classroom, have students use the unique codes on their stamp cards from the exhibit to logon to the **MeLaß** website (also on their stamp cards) and view their beta character as well as see the goal they set for themselves and explore the tips they received during their visit. If the students do not have access to computers, they are welcome to access it at home or through a smart phone.
2. Have students continue to track their progress on their goals over a given time period using a chart they create. For those who achieve their goal, consider an acknowledgement or reward in the classroom as an added incentive. Then have students write a paragraph or letter outlining how they tried to achieve their goal, if they had success, and if they did not meet their goal, why they think they did not meet it. (Additional Standard: LAFS.3.W.2.4, LAFS.4.W.2.4, LAFS.5.W.2.4)
3. Have students draw the beta character they designed in the exhibition. If they do not remember what their beta character looked like, have them create their own.



Frost Science | MeLaß Post-Field Trip Activity | 3RD - 5TH Grade

SMART GOAL SETTING



SMART GOAL SETTING

MeLaß Goal Setting

Specific

What do you want to achieve?
List your goal on your sheet.

Measurable

How will you track progress?
List how you will record your progress.

Daily? Weekly? Monthly?
On a calendar? In a journal? On a chart?

Attainable

Is the goal capable of being accomplished?
List some strategies you can take to accomplish your goal.

Relevant

Why did you choose this goal?
List the reasons you picked this goal and how it will benefit you.

Timely

When do you want to accomplish your goal by?
List when you want to achieve your goal.

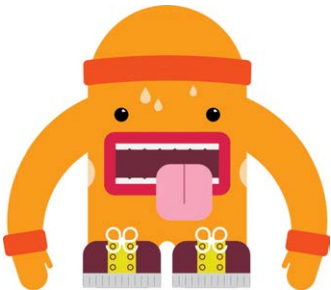
What is something you can do today to help achieve your goal? How about tomorrow? And next month?

MeLaß Goals



EAT

- ✓ Drink at least 6 cups of water a day,
- ✓ Bring my own healthy lunch to work/school at least three times per week.
- ✓ Drink no more than one soda per week (or none!).
- ✓ Eat a fruit or vegetable with every meal.



MOVE

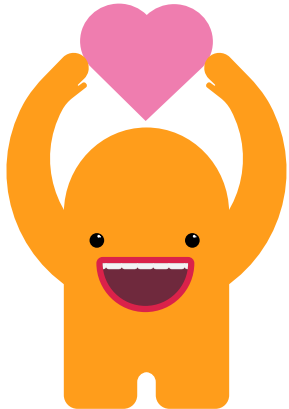
- ✓ Go for a 30-minute bike ride at least once a week.
- ✓ Climb a flight of stairs at least once a day.
- ✓ Play outside three times a week.
- ✓ Go for a 30-minute walk every day.

MeLaß Goals

RELAX



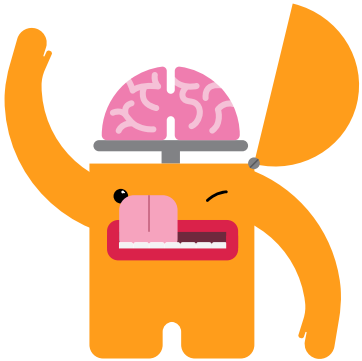
- ✓ Take four deep breaths and notice my heart rate slowing down at least once a day.
- ✓ Spend 30 minutes every day playing or doing things that relax me.
- ✓ Turn off my TV, computer and not play on my phone at least 30 minutes before bedtime.
- ✓ Get the recommended hours of sleep for my age every night (9-11 hours).



CONNECT

- ✓ Give a heartfelt smile to someone at least once a day.
- ✓ Wash my hands at least five times a day.
- ✓ Tell someone thank you and why I am grateful for them at least once a day.
- ✓ Become a volunteer for a cause that interests me, and volunteer once a week.

MeLaß Goals



LEARN

- ✓ Start and finish a new book within two weeks.
- ✓ Take up a new (or long lost) hobby and practice it at least once a week.
- ✓ Try something new (food, activity, route, etc.) every day.
- ✓ Learn how to say hello, goodbye, please and thank you, in another language.

SMART GOAL SETTING

MeLaß Goal Setting

Specific

What do you want to achieve?
List your goal on your sheet.

Measurable

How will you track progress?
List how you will record your progress.

Daily? Weekly? Monthly?
On a calendar? In a journal? On a chart?

Attainable

Is the goal capable of being accomplished?
List some strategies you can take to accomplish your goal.

Relevant

Why did you choose this goal?
List the reasons you picked this goal and how it will benefit you.

Timely

When do you want to accomplish your goal by?
List when you want to achieve your goal.

What is something you can do today to help achieve your goal? How about tomorrow? And next month?

SMART GOAL SETTING

MeLaß Goal Setting Student Worksheet

Specific

Measurable

Attainable

Relevant

Timely

Sample Post-Field Trip Activity

SMART GOAL SETTING

MeLaß Goal Setting Student Worksheet

S pecific	Disconnected from internet on Sat/sundays
M easurable	mark on a calendar
A ttainable	put laptop away
R elevant	realized six days a week of media is enough.
T imely	I will like to habituate myself by doing this for a month and write on for a year.



SMART GOAL SETTING

MeLaß Goal Setting Student Worksheet

S pecific	Go for 30 minute Run every day.
M easurable	Record the number of laps run.
A ttainable	Run one lap at a time.
R elevant	Increase stamina and endurance.
T imely	By December 31, 2016



SMART GOAL SETTING

MeLaß Goal Setting Student Worksheet

S pecific	Climb a flight of stairs once a day
M easurable	I will keep a daily log sheet
A ttainable	Take a break to visit a friend from a class upstairs or least once a day
R elevant	I would like to get more exercise but I do not have much time
T imely	I want to start today and do it forever.



SMART GOAL SETTING

MeLaß Goal Setting Student Worksheet

S pecific	Get the recommended hours of sleep for my age every night. 9-11 hours!
M easurable	I will use an app that tracks when I sleep and wake up on my phone.
A ttainable	No caffeine in the afternoon and night. Do homework early in day. Turn off computer and tv 30 minutes before bed.
R elevant	Because I feel good when I get enough sleep. I don't like when I'm tired.
T imely	I want to start today and I will check in with my progress every 2 weeks and hope it becomes a habit.



SMART GOAL SETTING

MeLaß Goal Setting Student Worksheet

S pecific	Walk 30 minutes a day
M easurable	I will use a calendar to mark days that I walked. I will use my phone's timer to ensure that I walk 30 minutes.
A ttainable	I will tell my sister to ask me each day if I walked.
R elevant	I want to accomplish this goal so that I make spare/time to reflect.
T imely	I hope to accomplish this goal by the end of each week.



SMART GOAL SETTING

MeLaß Goal Setting Student Worksheet

S pecific	Drink more water
M easurable	I can count the glasses. I want to drink 6 glasses (Big!)
A ttainable	I can drink anywhere, Sink, Cafeteria, take my water bottle, even use water fountain
R elevant	When I drink more water I feel better and eat less junk
T imely	I want to do this today and every day.

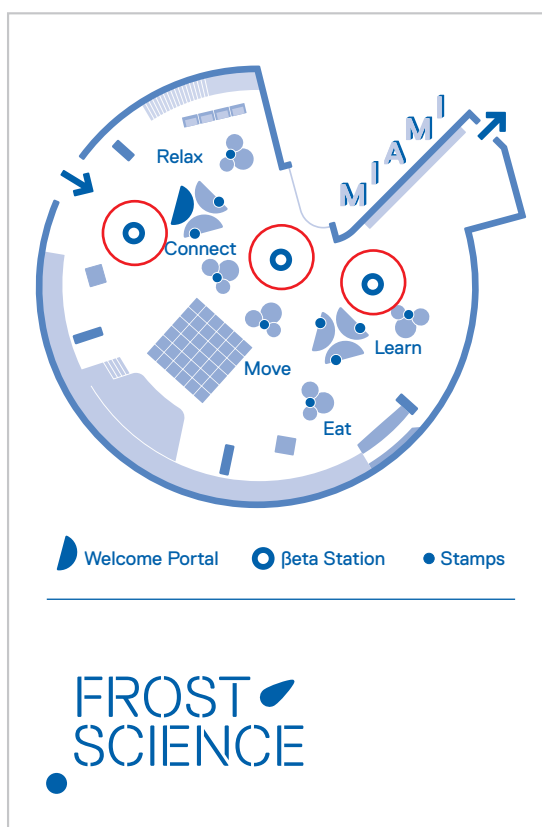


Teacher and Chaperone Guide

- Give each student a MeLaß card.
- Use MeLaß card to collect activity stamps in each zone.
- Scan the card at a β eta Station to create a profile and customize a β eta.
- Keep exploring the zones and checking back in at any β eta Station to unlock accessories.
- Keep card and use unique code to log in online after visit.



Front of MeLaß card.



Back of MeLaß card.

CHECK IN

CONNECT

Ask:

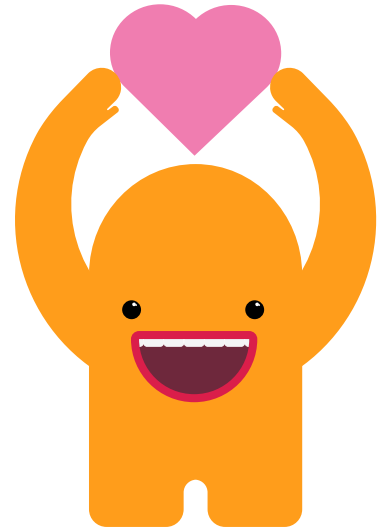
How do you stay connected with others?

Some possible answers include...

- I talk to friends and family members.
- I use social media.
- I have dinner or lunch with others.
- I am part of a team or a club.

Say:

Long-term **loneliness** has been shown to be as bad for your health as smoking or obesity. Talking, listening and even quiet time with others can help you stay connected and improve your **mental and physical health**.



FROST SCIENCE | MeLaß FIELD TRIP



FLOOR PLAN

● CONNECT

CHECK IN

RELAX

Ask:

What happens to your body when you get stressed? Feel relaxed?

Some possible answers for "stressed" include...

- I get nervous.
- I sweat.
- I start breathing more and more heavily.
- My heart beats faster.

Some possible answers for "relaxed" include...

- I feel happier.
- I have more energy.
- I sleep better.

Say:

We all experience stress, there is no avoiding it! Learning to manage stress by relaxing has both physical and mental benefits. Next time you feel stressed try taking four deep breaths. You may notice your heart rate and breathing slowing down and you may feel more calm.



FROST SCIENCE | MeLaß FIELD TRIP



FLOOR PLAN

● RELAX

CHECK IN

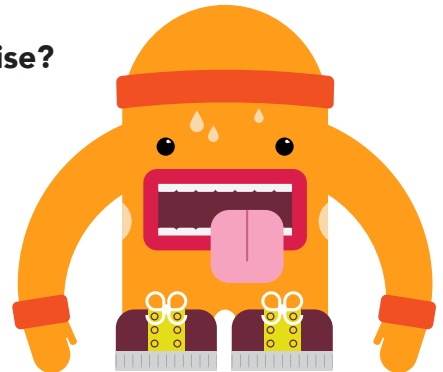
MOVE

Ask:

What happens to your body and your brain when you exercise?

Some possible answers include...

- My heart speeds up.
- I start breathing more and more heavily.
- I burn calories (energy).
- I feel happier or more relaxed afterward.
- I am more likely to be able to concentrate afterward.



Say:

When you exercise, your **heart** and **lungs** need to work harder to deliver more oxygen and blood throughout your body. **Moving** your body regularly helps improve your mood, memory and helps your bones and muscles get stronger, including your heart – it's also a muscle!

FROST SCIENCE | MeLaß FIELD TRIP



FLOOR PLAN

● MOVE

CHECK IN

EAT

Ask:

What happens to your body when you do not get enough food (fuel/energy)? When you eat too much?

Some possible answers for "not enough" include...

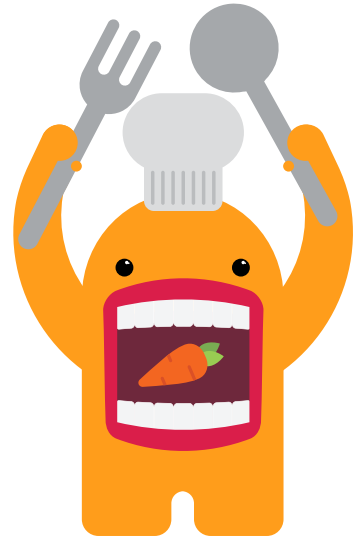
- I get moody.
- I feel tired or sleepy.
- I don't have enough energy.

Some possible answers for "too much" include...

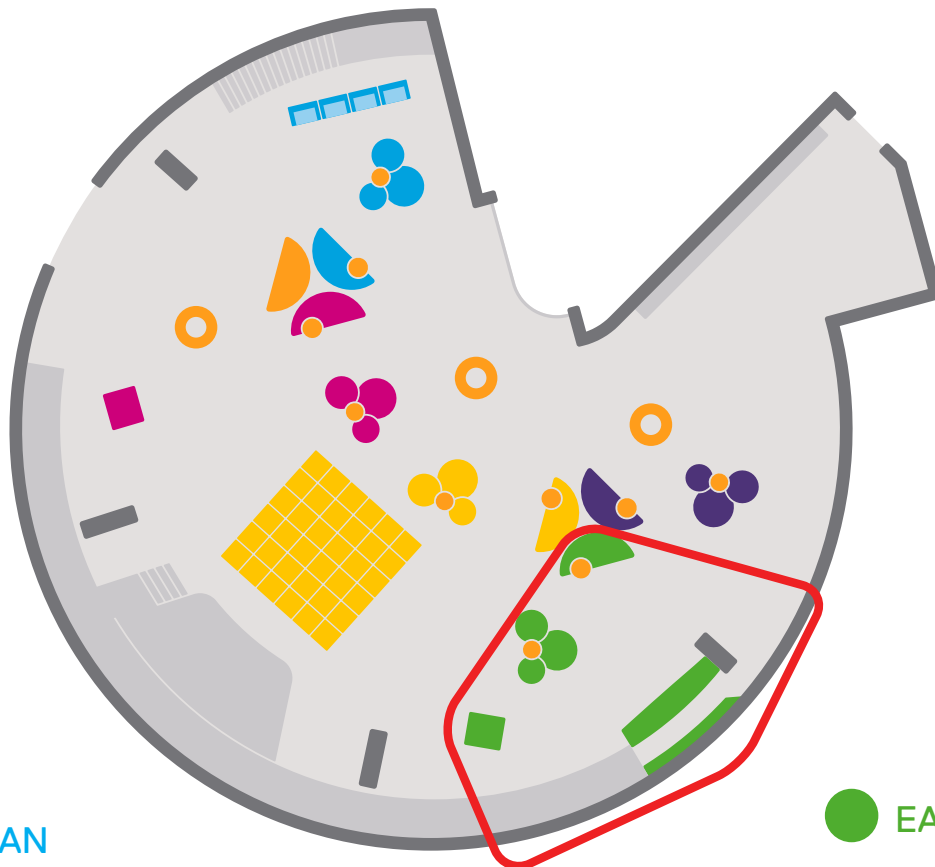
- I feel drowsy.
- I find it hard to concentrate.

Say:

Food is **fuel (energy)** for your body. All foods have different amounts of **calories** and nutrients. Our diets need a **balance** between how much we eat and how much energy we use as well as a balance of carbs, proteins, and fats.



FROST SCIENCE | MeLaß FIELD TRIP



FLOOR PLAN



CHECK IN

LEARN

Ask:

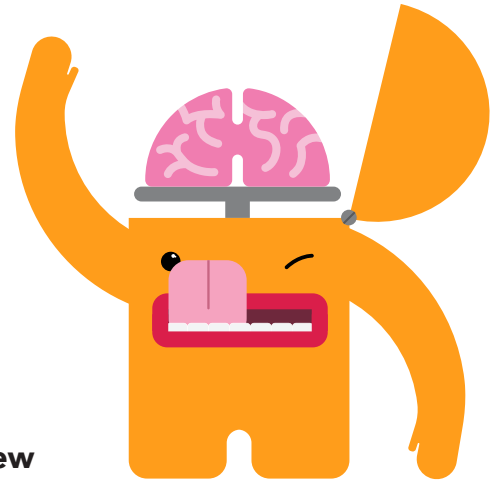
Healthy brain = healthy body! How do you keep your brain active and healthy?

Some possible answers include...

- I keep studying and learning.
- I exercise.
- I don't smoke!
- I eat healthy food.

Say:

Everything you do involves your brain! Every **experience** and **new activity** you have **shapes** your brain. This means that eating, exercising, learning, social connections and relaxing are all linked and important for keeping a healthy and active brain.



FROST SCIENCE | MeLaß FIELD TRIP



FLOOR PLAN

LEARN