|  |
| --- |
| **Learning Set 1: What Do You Do for Thrills?** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Driving Question**  **for the unit:**  How can looking for thrills make me miserable?  **Sub-Driving Question**  **for the learning set:**  What do you do for thrills? | |  | | --- | | **Materials**   * Computer - one per pair of students * Projector - one for the class * Large “whiteboard” - to be used as Driving Question Board * Sub-driving question cards * Sticky notes * Markers     **Videos**  Cedar Point and thrills - <https://drive.google.com/open?id=1AJ25dwljrWG0LEZHvACbkJE9o9CQqDlY>  Vaping- <https://drive.google.com/file/d/1DBPwEALczGTBJpPb7wEE-huPO75ETEbm/view?usp=sharing> |   **Resources**  Phenomenon and modeling PowerPoint presentation -  My SUD Modeling Chart - Teachers' complete version  How to talk to youth about Cannabis  <https://www.thenationalcouncil.org/program/getting-candid/cannabis-resource-center/?mkt_tok=NzczLU1KRi0zNzkAAAGIpg0Un7fVnkeWn_39yfReMPZPT9leKBjbwkYoTjwIxSU32PNopsMjvEF6kSHtCZHhQhDOlYlCmMCUDrDPj7LveBiE9Ri4sP3Rev3BPGDIfg> | |  | | --- | | **Suggested learning set time**  3 days | |

|  |  |
| --- | --- |
| **Student materials:**   * Cedar Point Thrills Video * Vaping Video |  |

|  |
| --- |
| **Framing the Unit** |

This unit guides students through a journey to figure out thrill seeking, and how thrill seeking evolved as a survival mechanism, but because of environmental changes and modern lifestyle, thrill seeking can sometimes lead to substance use disorder (SUD), misery and even death. Throughout the unit, students investigate several sub-driving questions to support them to gradually answer the *big* driving question: “How can looking for thrills make me miserable,” which encompasses these scientific ideas.

Guided by the sub-driving question, the journey unfolds as students figure out:

* In **LS1** - What gets us excited by examining the sub-driving question “What do you do for thrills?”
* In **LS2** - The basic mechanism of the brain’s reward pathway which is responsible for the feeling of excitement through the sub-driving question “Why do thrills make us feel excited and happy?”
* In **LS3** - The importance of thrill seeking to our survival and how the reward pathway evolved through the process of natural selection. Students investigate the sub-driving question “Why do we all look for thrills?”
* In **LS4** - The risk for substance use disorders and behavioral addictions is caused, in part, by their environment. Students focus on both national and global trends related to SUD and behavioral addictions to understand the contribution of various environmental factors with the sub-driving question- “What puts us at risk for substance use disorder (SUD) and behavioral addictions”? (Part 1)
* In **LS5** - Some genes might cause us to be at risk for substance use disorder (SUD), while others might protect us against it. Alcohol flush is a genetic mutation that causes discomfort following alcohol consumption. Alcohol use disorder is caused by the interaction of an individual’s genes and the environment. Taken together, with Learning Set 4, this information helps students answer the sub-driving question, “What are the environmental and genetic factors that put us at risk or protect us from SUD?”
* In **LS6** - What can students do to reduce the risk of addiction by designing and conducting a community action research project focused on making a change in their environment? Students address the sub-driving question “Can we make a change? What can we do to reduce the risk of substance use disorder and behavioral addictions for ourselves and our community?”

To see more details, refer to the **Storyline**.

In this learning set, students generate questions and an initial model regarding the search for thrills. They will revisit the questions they generated throughout the unit as they build understanding about how gene-environment interaction affects people’s health.

|  |
| --- |
| **Framing the Learning Set** |

**Purpose**

In this first learning set, the students will be introduced to the driving question of the unit, **How can looking for thrills make me miserable?**The anchoring phenomenon for the unit is the thrill seeking. At the onset of this learning set, students watch two videos focused on the search for thrills: 1) A video of roller coasters, and 2) A set of teens’ testimonials in which they reveal their addiction to vaping. Following the videos, students will generate questions that drive their learning throughout the unit. They figure out the biological mechanism of the search for thrills which can lead to substance use disorders (SUD) or behavioral addictions (i.e., the reward system in the brain), and the effect of both genes and environment on our vulnerability for SUD or behavioral addictions.

**Learning Set Learning Goals (For instructional use)**

* The students generate questions about the search for thrills.
* The students develop a model about their thrill-seeking behaviors.

|  |
| --- |
| **Overview of the Learning Set** |

|  |  |  |
| --- | --- | --- |
| **Instructional sequence overview** | **What students figure out**  **(Take home messages)** | **Instruction days** |
| **Lesson 1 - Introducing the Learning Set: Family Engagement**  In this lesson, students interview family members about thrill seeking, and share with peers. | People like to feel thrilled. It feels good to feel thrilled but only to a point. People engage in various activities, (both positive and negative), to get thrills. | 1 day + homework |
| **Lesson 2 - Why do we look for thrills such as vaping?**  *Anchoring phenomenon: thrill-seeking*  Students watch two videos focused on the search for thrills: (1) A video of roller coasters; and (2) a set of teens’ testimonials in which they reveal their addiction to vaping. These videos are used to prompt students to talk about and share their knowledge and/or experience with thrill seeking.  *Developing a Driving Question Board*  Following the discussion, students generate questions about various aspects of thrill seeking. These questions will be organized and posted on a classroom Driving Question Board (DQB), a visual reference for the entire unit. | 1 day |
| **Lesson 3 - Modeling: How can we explain a phenomenon?**  The students begin to generate models of thrill seeking. The goal of this lesson is to introduce the students to the practice of scientific modeling. The students revisit the **Driving Question Board** **(DQB)** and reflect upon their learning. | 1 day |

|  |
| --- |
| **Resources** |

1. The reality of social media - <https://www.youtube.com/watch?v=0EFHbruKEmw>
2. Screen time and social media: <https://www.cnn.com/2018/01/22/health/smartphone-screen-time-happiness-study/index.html> <https://www.youtube.com/watch?v=8woKcr7u-YQ> <https://www.youtube.com/watch?v=HsNNcdDWW3I> <https://www.youtube.com/watch?v=cKaWJ72x1rI>
3. Vaping in the news:

* <https://www.healthline.com/health-news/fda-orders-10-companies-to-stop-selling-their-e-cigarette-products#The-specific-accusations>
* <https://www.detroitnews.com/story/news/education/2018/03/26/vaping-popular-students-michigan/33285027/>
* <https://www.edweek.org/ew/articles/2018/07/18/juuling-and-teenagers-3-things-principals-and.html?cmp=eml-eb-popweek+07272018&M=58559506&U=1771887>
* <https://www.nytimes.com/2018/09/12/health/juul-fda-vaping-ecigarettes.html?rref=collection%2Fsectioncollection%2Fhealth&action=click&contentCollection=health&region=rank&module=package&version=highlights&contentPlacement=1&pgtype=sectionfront>

1. Risks of vaping: <https://www.cdc.gov/tobacco/e-cigarettes/youth.html?CDC_AAref_Val=https://www.cdc.gov/tobacco/basic_information/e-cigarettes/Quick-Facts-on-the-Risks-of-E-cigarettes-for-Kids-Teens-and-Young-Adults.html>
2. <https://www.sciencenewsforstudents.org/article/concerns-explode-over-new-health-risks-vaping>

|  |
| --- |
| **NGSS Connection to Assessment** |

|  |  |  |
| --- | --- | --- |
| **Target Performance Expectations**  [**MS-LS1-5**](https://www.nextgenscience.org/pe/ms-ls1-5-molecules-organisms-structures-and-processes)**.** Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms. | | |
| **Learning Performances for Learning Set 1 to be Assessed**  Students develop and use models to explain and predict the thrill seeking. | | |
| **Disciplinary core idea** | **Science and engineering practices** | **Crosscutting concepts** |
| **LS1.B: Growth and Development of Organisms** | **Developing and using models**  Develop and/or use a model to predict and/or describe phenomena | **Pattern:** Patterns can be used to identify cause and effect relationships. |
| **How these elements are integrated and embedded in this learning set**  After watching videos about roller coasters and teens’ testimonials about vaping, students will share their knowledge and/or experience related to thrill seeking, which will lead them to generate questions about various aspects (positive and negative) of thrill seeking. They will generate an initial model to explain thrill seeking. | | |

|  |
| --- |
| **Connection to Students’ Lives** |

**Link to out-of-school activity and everyday life**

* **Drugs**: Substance use disorders (SUD) is one of the most common public health problems in the United States; 1 in 7 in the USA will face substance addiction. Moreover, the [World Health Organization](http://www.who.int/gho/substance_abuse/en/) (WHO) estimates that the global burden of disease related to drug and alcohol issues to be 5.4 percent worldwide.
* **Social media**: social media has become a cornerstone of modern communication and networking in modern society. However, excessive use of social media may lead to problematic, annoying and dangerous behaviors.

**Link to career-awareness**

Explain to the students that doctors, health providers, and scientists pursue answers to questions that help them explain and figure out phenomena. This will give students a purpose/motivation for generating questions.

* **Social worker**: A person who works with individuals, families, groups and communities to support social functioning and overall well-being. They help individuals and families treat and prevent substance use disorders (SUD) or behavioral addictions.
* **Substance Abuse Counselor:** A mental health professional who works with individuals and their families to treat both mental and emotional disorders, as well as to promote overall mental health.
* **Health Educator**: A person who provides information and designs programs to prevent substance use disorders (SUD) or behavioral addictions and related illnesses before they happen. Health educators may work for schools, health care facilities, or community and public health agencies.
* **Psychiatrist**: A physician devoted to the diagnosis, prevention, study, and treatment of mental disorders.

|  |
| --- |
| **Instructional Sequence** |

|  |
| --- |
| **Lesson 1 – Introducing the Learning Set: Family Engagement** |

|  |  |
| --- | --- |
| **Learning Goal** | The students generate questions about thrill seeking. |
| **Connection to NGSS** | DCI: LS1.B: Growth and Development of Organisms |
| Practice: Asking questions |
| CCC: Pattern |

The goal of this lesson is twofold: a) Use students’ lived experiences and knowledge as an asset in the science class, b) Build a relationship with students’ families by bringing their knowledge, experiences, and expertise into the class as a resource and asset for student learning.

1. Discuss with the students, why do people look for thrills? For example:
2. What does the word “thrills” mean?
3. What are things you think about when you hear the word “thrills”?
4. What does it feel like when you feel thrilled?
5. What makes us excited?
6. Why do we feel excited?
7. Does excitement make us happy?
8. Is it important to be happy? Why?
9. What are thrills?
10. Can thrills make us excited? How?
11. What do people do to be thrilled/to feel excited?
12. Is looking for thrills a good thing or a bad thing? Why?
13. Did people look for thrills the same or differently now than in the past?
14. Does our modern lifestyle affect the way we look for thrills?
15. Develop a survey instrument: In pairs, have the students think of 5-10 questions they would be interested in asking their parents and family members related to the discussion in the class. Share the questions with the class and make up a list of 10 questions. Make sure that questions include fun, family-friendly examples to encourage family members to reminisce and share. Students will use these questions for their home assignment. Be sure that students collect the age or age range of the individuals that they interview. See [**Family Engagement**](#sdc86rvu5nmw) for more details.
16. Conduct the interview and compile data: Students use the questions that they created in Lesson 1 to interview family members about their lives and create an artifact to present in the class. Examples of artifacts include audio-taped or videotaped interviews, drawings, selfies and written answers, a song using the parents’ answers, etc. Have students share their interviews and artifacts with their peers. Students should collect the age or age range of interviewees so answers can be compiled by age. Students can analyze similarities and differences of answers by age. Students should ask adults, such as their grandparents and parents about what they do for a thrill now and when they were young. They can analyze changes over time. [Additionally, students may interview school personnel such as other teachers, administrators, support staff, etc.]
17. Data analysis: To analyze data, students should categorize the survey results into different age groups, for example, responses from older adults (e.g their grandparents or seniors), adults (e.g. Their parents or caregivers), older kids (e.g. their friends or cousins), and younger kids (e.g. their younger siblings or cousins). Give flexibility to students so that they can come up with their own ways to collect data and represent it. Students can compare responses between ages and over time. Are there differences depending on age? How might these differences be explained?

|  |
| --- |
| **Lesson 2 – Why Do We Look for Thrills?** |

|  |  |
| --- | --- |
| **Learning Goal** | The students generate questions about thrill seeking. |
| **Connection to NGSS** | DCI: LS1.B: Growth and Development of Organisms |
| Practice: Asking question |
| CCC: Pattern |

|  |  |
| --- | --- |
| dea.png | The purpose of the lesson is to engage the students in the Driving Question of the learning set:**How can looking for thrills make me miserable?**and to trigger students to think about the search for thrills, and how this search in a modern world could have terrible consequences on our health. The questions that the students ask will be posted on the Driving Question Board and will be answered throughout the unit. At this point, since students are not expected to come up with correct answers, encourage them to share their knowledge, accept all answers, and tell them they will return to this information later in the curriculum. |

1. **Introducing the phenomenon - the search for thrills:**  Show the students the first video about thrills in Cedar Point amusement park.
2. **Asking questions:** Play the video again to the students, but this time ask the students to think and write as many questions as possible that focus on the search for thrills.
3. **Discussion**: Have the students share the questions with the class. As students share their questions, write them on the board.

Use the *Brainstorming* strategy (see below) to demonstrate to students some ways to generate questions and provide additional examples. Write them on the board.

1. **Introducing the phenomenon - how searching for thrills can cause us to engage in vaping:** Show students the second video that includes kids’ testimonials about vaping.
2. **Asking questions:** Play the video again to the students, but this time, ask the students to think about and write as many questions as possible that focus on the search for thrills, including vaping. Tell students to keep in mind the previous video about searching for thrills at Cedar Point.
3. **Scaffold asking questions:** Have the students share the questions with the class. As students share their questions, write them on the board. Think of additional questions and guide students to ask questions related to students’ testimonials about vaping and the previous video about Cedar Point. Add them to the board.

Use the *Brainstorming* strategy to demonstrate to students some ways to generate questions and provide several examples.

|  |  |
| --- | --- |
| reativity.png | **Scaffolding students using *learning strategies***   1. **What are learning strategies -** Explain what learning strategies are and emphasize the importance of learning strategies for effective learning. These are ways that students use to learn or accomplish something and help them become independent learners. 2. **Explain what *Brainstorming* is and how it can be used** - Brainstorming is a strategy for generating ideas. It includes generating a list of spontaneous ideas which are associated with a specific topic. For effective brainstorming: a) focus on quantity, b) withhold criticism, c) welcome unusual and wild ideas, and d) combine and improve ideas. 3. **Scaffold *Brainstorming*** - Together with the entire class, use the *brainstorming* strategy to generate as many questions as possible regarding *looking for thrills*: 4. **Generating “anchors”:** Tell students to imagine think about the different aspects of the search for thrills, **for examples:**    1. ***What do you do for thrills? Activities (Learning set 1)***       1. *Why would you look for thrills?*       2. *Who looks for more thrills? kids? teens? adults?*       3. *Why do people want to feel excited?*       4. *What do YOU do for thrills?*       5. *Are all thrills “positive”?*       6. *Are there any “negative” thrills? What other “negative” thrills are there?*    2. ***Why do thrills make us feel happy and excited? Our body (Learning set 2)***       1. *What happens in our body to make us feel excited?*       2. *Does the feeling of excitement have to do with our brains?*       3. *Do all people feel excited from the same activities?*       4. *Is it healthy for us to feel excited?*       5. *Does it have to do with hormones?*       6. *Is being thrilled from roller coasters the same as being thrilled from vaping?*       7. *Is it the same process that makes us feel excited when riding roller coasters and vaping?*    3. ***Why do we all look for thrills? Reasons & importance (Learning set 3)***       1. *Is it good to look for thrills? Is it important for us to look for thrills?*       2. *Can searching for thrills be bad for us? Is it dangerous?*       3. *Why do people search for thrills?*       4. *Who is a bigger thrill seeker? Kids or adults? girls or boys?*       5. *Should we avoid looking for thrills?*    4. ***Are we all at risk for substance use disorders (SUD) or behavioral addictions? Risk of substance use disorders (SUD) or behavioral addictions (Learning set 4,5)***       1. *Is everyone excited by the same activities?*       2. *Are we all thrill seekers? Are there levels of thrill seeking?*       3. *Are some people more thrill seekers than others? Why?*    5. *How do cellphones or social media give us thrills?* ***Can we make a change: What can we do to reduce the risk of substance use disorders (SUD) or behavioral addictions for ourselves and our community? Possible actions (Learning set 5)***       1. *Would raising awareness to the negative consequences of thrill seeking reduce our temptation to search for thrills?*       2. *Is there anything we can do to reduce our risk of participating in negative thrill seeking?*       3. *How do we balance negative and positive thrill seeking?*   *\*\*This is not an exhaustive list\*\** |

1. **Asking questions:** In pairs, have the students continue to write as many questions as they want (They can also use questions from the board). Then, each pair should:
   1. Choose two questions, one for each partner, that interest them the most and to which they would like to know the answers
   2. Write the questions on the front side of the sticky notes and indicate the reason for choosing the question.
2. **Grouping questions**: In pairs and with their questions, have the students walk around the class and examine their peers’ questions. Ask the students to form groups according to similar questions and sit in different areas of the class.
3. **Exposing the Driving Question Board**: Expose the class to the Driving Question Board, which at this point includes the Sub-Driving Questions.

|  |  |
| --- | --- |
| reativity.png | **Scaffolding students using *learning strategies***   1. **What are learning strategies:** Explain what learning strategies are and emphasize the importance of learning strategies for effective learning. 2. **Explain what *a Driving Question Board******(DQB)*** ***is and how it can be used:*** A Driving Question Board (DQB) is a visual reference used to develop students’ understanding of the overarching driving question. It is a dynamic tool, which will organize learning and change over time as the students progress through the lessons. |

1. **Discussing:** With the entire class, discuss the questions that were generated by the pairs and the grouping of pairs together under similar topics. For example:
   1. Why did you choose these questions?
   2. Why are you grouped together?
   3. What is similar/different about your questions?

Then, put the [Sub-Driving Questions (SDQs)](#7n7dzpsua00e) up on the DQB and, together with the students, make connections between their questions and groups and the SDQs:

* 1. If the questions fit under a SDQ, put them in the relevant place.
  2. If the questions do not fit a SDQ, put the questions in the “Parking Lot” and tell the students that we might come back to these questions later.
  3. As additional questions are asked during the process, write them on sticky notes and put them up under the relevant SDQs or the Parking Lot.

1. **Discussion and exposure of the driving question for the unit**: Tell the students that by answering all the sub-driving questions and the questions that they generated, they will be able to answer the driving question of the unit, “How can looking for thrills make me miserable?”
2. **Working with the DQB:** Tell the students that the questions that they asked will be revisited throughout the unit, as each learning set will address a different SDQ.

|  |
| --- |
| **Lesson 3 - Modeling - How Can We Explain a Phenomenon?** |

|  |  |
| --- | --- |
| **Learning Goal** | The students develop a model about their thrill-seeking behaviors. |
| **Connection to NGSS** | DCI: LS1.B: Growth and Development of Organisms |
| Practice: Developing a model |
| CCC: Cause and effect |

|  |  |
| --- | --- |
| Picture1.png | Throughout this exercise, the teacher will introduce the **modeling cycle** and its constituent steps. The **Modeling Cycle graphic** can be found at the bottom of this learning set.  The phenomenon for this exercise will be **addiction**. The question is, “What do you do for thrills?” In science, models are used to help **explain and understand** phenomena (phenomena are recurring, measurable events we can experience in everyday life). Models can also be used **to make predictions** about phenomena. By observing how the model represents the phenomenon and then comparing it to the actual behavior of the phenomenon, the model can be **revised** to more accurately reflect the phenomenon. |

**Developing models for the Unit -** How can looking for thrills make me miserable?In this lesson, students develop one part of the model that will focus on the sub-driving question of this learning set, “**What do you do for thrills?”**

1. **Based on their experience in this learning set, together, complete and discuss the My SUD Modeling Chart Student Version (not filled in) /** [**Teacher**](https://docs.google.com/document/d/1USOkD6p0IRsxdSVSpIRrVfsEZyP0RbKhgH7sDFlIDdU/edit?usp=sharing)**’s version**
2. **REFLECT upon learning in pairs**
   1. **Identify the sub-driving question-** What is the sub-driving question that students were asked to think about during the Learning Set?
   2. **Identify the questions**- What questions did students pose at the beginning of the Learning Set?
   3. **Identify the Main Message (**Whole group discussion) - **What** did students figure out from the Learning Set? Use the following prompts:
      1. What do you think are the take-home messages from the learning set?
      2. What did you learn in this learning set?
   4. **REFLECT upon learning as a whole group/class.** Review students’ answers for the first three sections of the table.
   5. **PLAN as a whole group/class.** 
      1. **Identify the components** - Start with a class discussion to remind the students of the different components of **activities that they (people) do for thrills** as they discussed when creating the Driving Question Board, for example: Playing sports, getting good grades, using social media, gaming, drugs, vaping, gambling etc.
      2. **Identify the components** - Also ask students to find **consequences** of each activity (can be either positive or negative). For example: looking cool, getting better, feeling excited, addiction, illness etc. Be sure to use the My SUD Modeling Chart for the Learning Set to support the discussion about components. These are just suggestions, students will likely come up with many more on their own and through the discussion.
   6. **PLAN as a whole group/class.**
      1. **Generate different components** - Write each component on its own sticky note. Each component should be relevant. (At this point, components in a student's model may not be measurable. It is fine even if they cannot come up with the components that are measurable).
      2. **Organize the components** - organize the components in categories, such as: positive consequences, negative consequences, and etc.
   7. **BUILD as a whole group/class- Connect the components (demonstrate to the class before students go into small groups or do as a whole class)**: Connect the components in a **causal relationship** from the cause to the effect. Students should use arrows to show the directionality of the connection. (Hint: For the most part, the arrows will go from thrill seeking.)
   8. **TEST/REVISE** **as a whole group/class**- **Evaluate models**: Instruct students to switch off in the roles of presenter and listener. Explain the phenomenon by explaining how the components thrill people. Have the students test their models by applying the following questions:
   9. Does your model explain and predict?
   10. Does your model make sense? Does it make sense when you use increase-decrease language?
   11. Are the components in your model relevant to activities for thrill?
   12. Does your model show cause-effect relationships?

Together, make any changes needed to make their models more clear and complete.

* 1. **SHARE as a whole group/class -** Collectively, share the models with the class such as a gallery walk. Use the questions above, e.g one per small group, to have students present to the large group.
     1. When sharing models, discuss with the students:
        1. The similarities and differences between the models
        2. The models’ strengths and weaknesses
        3. Ways to improve the various models
  2. **REVISE as a whole group/class or in small groups** - Based on feedback and observing other models, have the students revise their models. Once they finish, they can document (e.g take a picture of) their group’s model and send it to their teacher. These models can be used for formative assessment, and for students’ to examine and reflect upon their model development process at the end of the unit.

|  |  |
| --- | --- |
|  | While the students model, move around the class, support the students, and encourage them to share their thinking and consult with their peers about their models. Students’ models can vary. However, since the models need to explain the relationships among the components, make sure the models include:  **Components**   * Thrill seeking * Activities that people do for thrills (examples as below)   + drugs, alcohol, vaping, playing sports, getting good grades, social media, gaming, etc. * Positive consequences (examples as below)   + Looking cool   + Getting excited * Negative consequences (examples as below)   + Health issue   + substance use disorders (SUD) or behavioral addictions   **Relationships and labels**   * The relationships among the components * The relationship between each activity and thrill seeking |

|  |  |
| --- | --- |
| discussion.jpg | A discussion which shares insights from the various models and compares among them is extremely important as it will scaffold the students’ second revision of their models in the following step. Use questions to prompt the students to critically examine their peers’ models.  **Components:**   * **Components identity**: What components are included in each model? Are key components included? * **Number of components**: How many components are indicated in the model? Are MORE components necessarily better? * **Grouping of components:** How can we group the various components? Why should we group components—does it improve our models? Is the grouping meaningful?   **Relationships among components:**   * **Explicit relationships among the components**: Are the relationships among the components indicated? Do these relationships make sense? Are the indicated relationships important?   **General features:**   * **Complexity of the model**: How complex is the model? * **Organization**: How well is the model organized? Is the organization meaningful? |

|  |
| --- |
| **Wrapping-up the Learning Set - Revisiting the Driving Question Board** |

With the class, revisit the **Driving Question Board** **(DQB)**. Prompt the students to reflect upon their learning using the following prompts, and adjust the DQB as appropriate:

1. Which questions on the DQB have we answered, and which remain open?
   1. Students should attach their answers/artifacts of investigation onto the DQB next to the questions they relate to.
2. After completing the lessons in the learning set, do you have any additional questions?
   1. Add new questions to the board near the SDQ they relate to.
3. Ask students some transitional questions that are related to the next learning set, “**Why do thrills make us feel excited and happy?”**
   1. How do you feel when you do something thrilling?
   2. What makes us feel excited and happy?

|  |
| --- |
| **Family Engagement** |

**Lesson 1 Family interview about thrill seeking** - Students use the questions that they created in Lesson 1 to interview family members about their lives and create an artifact to present in the class. The purpose of this activity is to engage family members in students’ learning and bring in student and family knowledge into science class as an asset and resource.

|  |
| --- |
| **Career awareness** |

Ask students if they know of someone who works to prevent or treat drug abuse. What do they do?

|  |
| --- |
| **Follow-Up Activity** |

Instruct the students tocomplete the reading assignment: **What are scientific models?**Use it as homework and discuss their answers to the worksheet in the next class.

**Sub-Driving question for Driving Question Board**





**REASONS**

**and**

**IMPORTANCE**

Why do we all look for thrills?

**DRUGS & THE BRAIN**

How can looking for thrills hijack our brain?

**RISK of Substance Use Disorders (SUD) or behavioral addictions**

What puts all of us at risk for substance use disorders or behavioral addictions?

**POSSIBLE ACTIONS**

Can we make a change:

What can we do to reduce the risk for substance use disorders (SUD) or behavioral addictions for ourselves and our community?