Lesson Title: It's Not Science Friction? **Grade/Level:2nd** **Date/Learning Experience #: November 1, 2024**

Curriculum Standards State Curriculum Standards – Underline your language/vocabulary words that connect to the lesson.	**Essential Question(s)/ I Can Statement(s):** What question(s) or I can statement(s) drive your instruction?
2.PS3.2 Make observations and conduct experiments to provide evidence that friction produces heat and reduces or increases the motion of an object. **SEP: Developing and using models.** Students make drawings, displays, and simple representations of events they experience through their senses, incorporating relative scales when appropriate. **CC: Systems and System Models** Students identify and describe parts and their roles in the inner workings as part of a larger system/object. **DCI: Energy in Chemical Processes and Everyday Life**	• I can make a prediction about how friction will affect an object. • I can conduct an experiment to see how different surfaces affect movement. • I can draw my observations and explain what I learned about friction.

Subject Specific Emphasis (CUAI)
Please indicate which Subject Specific Emphasis is being addressed. This should be considered simultaneously with the State Curriculum Standard. Click here for more information.

Instruction will support students to use scientific concepts and apply scientific practices through inquiry to develop reasonable predictions about a real-world phenomenon.

Lesson Objective(s) – Objectives use active verbs, are measurable, and link to standards. Consider using Bloom's Taxonomy or Webb's Depth of Knowledge. Please number objectives. **Add or remove rows as needed**	**Assessment/Evaluation** How will students demonstrate their understanding of lesson objective(s)? For each assessment complete the following: 1. Title and Brief Description 2. Informal or Formal 3. Formative or Summative Remember you should include multiple types of assessments and consider ways to assess whole group, small group, and individuals
1. Students will predict how friction will affect the movement of an object on different surfaces. (understanding/applying)	1. **Think-Pair-Share:** TSW discuss what they know about the concept of friction and if they can provide an example of it. 2. Informal 3. Formative
2. Students will experiment with various surfaces and observe how friction impacts speed and movement. (applying/analyzing)	1. **Field Observations:** TTW observe students as they conduct their experiments to gauge group engagement and comprehension. TTW ask assessing and advancing questions to determine the level of students' understanding and to advance their thinking. 2. Informal 3. Formative
3. Students will describe their observations, through drawings to explain the effect of friction on motion. (understanding/analyzing)	1. **Graphic Organizers:** TSW use a graphic organizer to draw their predictions, their observations during the experiment, and an explanation of why their outcome worked or did not work. 2. Formal 3. Formative

	1. **Group Sharing & Whole Class Discussion:** TTW conduct a whole-class discussion where students share their group's findings. TTW use targeted questions to assess whole-class understanding and clarify misconceptions. TTW complete the KWL chart as part of this assessment.
	1. **Exit Ticket:** TSW complete an exit ticket that includes a question about what they learned about friction and an example of how it affects everyday life. TTW use this assessment to gauge students' conceptual understanding on an individual level.

Assessment/EvaluationModifications

Include any modifications for assessments/evaluations for students (i.e., students with IEP or 504,ELLs struggling learners, advanced learners, and others). At least one modified formal assessment must be included with the plan. For exceeds expectation, you should provide justification for the assessment design based on observations of previous learning and/or assessment data.

Do not list instructional accommodations here (e.g., read aloud, preferential seating, extra time, etc.) in this section. You will include this information in the Meeting Group and Individual Needs section.

The graphic organizer will contain sentence starters, images, and a word bank to support struggling readers in their observations and explanations. TSW be sorted using flexible and mixed ability grouping based on universal screening literacy data to pair struggling readers with stronger readers.

The modifications to the graphic organizer (including sentence starters, images, and a word bank) are designed to support struggling readers in recording their observations and explanations effectively. This decision is informed by the easyCBM universal screener literacy data, which highlights the students needing additional literacy support. In addition to the universal screener data, previous observations have shown that these students struggle with spelling and lack confidence in expressing their ideas. Therefore, these interventions are strategically designed to support both their literacy needs and build their confidence by providing appropriate scaffolds, such as word banks and structured peer interactions. By providing these scaffolds, struggling readers can actively participate and communicate their understanding without being hindered by their reading challenges.

Flexible, mixed-ability grouping is another modification made based on assessment data. This grouping approach ensures that struggling readers are paired with stronger readers, which promotes peer support and collaborative learning. This setup enables students with stronger literacy skills to assist their peers in understanding instructions and completing tasks, leading to a more inclusive learning environment where all students can succeed.

Academic Feedback: Pick one assessment and describe how feedback will be provided.
How will your feedback promote student understanding and/or clarify misunderstanding of the learning objective(s)?

TTW provide individualized feedback on students' graphic organizers by noting areas where students' predictions aligned or did not align with their observations, focusing on recognizing and celebrating creative and out-of-the-box thinking. TTW emphasize and compliment students' unique approaches and ideas, providing more positive reinforcement than criticism to foster confidence and creativity. TTW will use specific strategies to address individual learning strengths and needs, such as:

- For visual learners, TTW provide additional diagrams or visual aids to help explain concepts more clearly.
- For students who excel in verbal expression, TTW encourage them to verbally share their observations before writing them down.
- For students needing more support with vocabulary, TTW provide sentence starters or word banks to guide their explanations.
- For students who demonstrate strong analytical skills, TTW challenge them to think deeper by asking questions like, "How might friction be different if we changed another variable?"
- For students who need additional time, TTW offer extended opportunities to complete their graphic organizers, either during class or as an additional activity.
- TTW have students return to their original groups and exchange graphic organizers with another group to provide peer-to-peer feedback.

TTW ask guiding questions such as, "What do you think caused this outcome?" to help students reflect on their understanding. TTW also highlight effective use of vocabulary, praise students' creative problem-solving, and encourage them to elaborate on explanations if needed, ensuring they feel valued for their original ideas. For students who need additional support, TTW provide verbal feedback and discuss one-on-one how they can improve their descriptions and understanding of friction. For students who need additional support, TTW provide verbal feedback and discuss one-on-one how they can improve their descriptions and understanding of friction.

Knowing Your Learners
What do you know about your students? How will this information be used in planning the lesson?

Pre-assessment data How have students performed previously? From where is the data drawn? How will you use this information?	**Personal, Cultural, and/or Community Assets** Identify these assets for your students and list specific ways this information will be incorporated into your plan.
Previous Performance: Previously, students have demonstrated varying levels of understanding of scientific concepts, which was observed during informal assessments in earlier lessons. Their abilities to predict outcomes, follow instructions, and explain their reasoning varied. **Pre-assessment Data Sources:** The data will be drawn from two sources: a pre-assessment focusing on friction and motion, and the easyCBM universal screener literacy data. The pre-assessment includes questions that assess students' understanding of friction, motion, and related vocabulary. The easyCBM data provides insight into students' reading abilities. **How the Data will be Used:** This information will be used to form balanced groups, pairing struggling readers with supportive peers to help them fully engage with the activities. Additionally, the data will guide instruction, allowing targeted support for students with misconceptions or gaps in understanding to ensure everyone is on even footing and is prepared to participate effectively in the lesson.	In this lesson, students' personal and cultural interests are acknowledged by allowing students to work in groups that align with their unique preferences: animals, sports, Harry Potter, and video games. By integrating themes that resonate with their personal experiences, students are more likely to engage with the content and relate scientific concepts to their own lives. The themes were carefully chosen to allow grouping that aligns with students interests, as well as the additional supports they will need. Additionally, the use of a familiar character like Bluey helps students feel a personal connection to the experiment, making the abstract concept of friction more accessible. The focus on group activities also encourages collaboration, reflecting the value of working within a community, which supports building social skills and appreciating diverse perspectives.

Academic Language Demands

Key Language Task: Select one activity from your lesson where language is featured. Describe this activity below.

In the "Recording Observations" portion of the lesson, students use a graphic organizer to draw and describe their predictions, observations, and explanations about how friction affects movement. They predict what will happen when an object is placed on different surfaces, record their observations as they conduct the experiment, and explain why the outcome occurred the way it did. This activity requires students to use academic and content-specific vocabulary such as "friction," "surface," "motion," and "resistance" both in writing and orally, fostering their ability to articulate scientific concepts clearly. This process encourages students to engage in higher-order thinking and practice their language skills in describing cause-and-effect relationships.

Language Objective - Write a language objective for your Key Language Task.	**Identified Language Demands**	**How will you support each demand?** **Objective:** TSW explain the difference between World War I and World War II. **Function:** Explain **Function support:** Model, Anchor Chart **Vocabulary support:** Word Chart, Journals, Glossary, Picture Cards **Syntax or Discourse support:** Graphic Organizer, Sentence Stems
Students will describe their observations and explain their findings orally and in writing using relevant vocabulary such as "friction," "motion," "surface," and "resistance." (Applying/Understanding)	**Function:** Explain	The graphic organizer will include sentence stems in each section to guide students in formulating and articulating their observations and explanations.
	Academic: Prediction, observation, experiment **Content**: Friction, motion, surface, and resistance.	The graphic organizer students will be using contains a word bank of academic and content vocabulary. All relevant vocabulary will be discussed and defined at the beginning of the lesson to ensure comprehension.
	Syntax or Discourse? Discourse	Students will use a graphic organizer to document their predictions, observations, and explanations. The graphic organizer will structure their thinking, help them use academic language effectively, and help them organize their explanations in a logical manner.
General Language Supports –	Students have individual dictionaries with banks of words to assist them with spelling and writing.	

What are things you do in the class every day to support language (e.g., word walls, anchor charts, vocabulary journals, etc.)?	When students encounter a new word they cannot spell, it is added to the dictionary. In addition, word walls, sentence stems, weekly vocabulary, and spelling words are posted in the classroom to support language.
Individual Supports – How are you supporting individual students to accomplish the key language task (e.g., ELL, student with autism, struggling reader or writer, student with significant language delays).	• The graphic organizer will include sentence starters, images, and a word bank to help struggling readers articulate their predictions, observations, and explanations. This scaffold will provide the necessary language support to reduce the cognitive load and help them communicate their understanding more effectively. • TTW pair struggling readers with stronger readers in mixed-ability groups. This approach allows struggling readers to benefit from peer modeling, receive support with vocabulary and reading comprehension, and engage fully with the activities, which encourages collaboration and confidence. • TTW allow struggling readers to explain their observations and findings verbally before attempting to write them. This method helps bridge the gap between understanding and expression, especially for students who may find writing challenging.

Higher Order Thinking Questions, Activities, Engagement	
Questions and/or activities for higher order thinking: These are open- ended and cannot be answered by yes or no. There should be a high frequency of questions,asked at various points throughout the lesson to guide rather than direct student thinking	5. How do you think the surface material affects the speed of Bluey going down the slide? Why do you think that is? (Analyzing) 6. Why do you think friction creates heat? Can you think of a time when you felt heat caused by friction in real life? (Applying) 7. How might friction be different on Earth compared to somewhere like the moon? Why? (Evaluating) 8. How is friction both helpful and unhelpful in everyday life? Can you give some examples? (Evaluating) 9. If you were designing a playground slide, how would you use what we learned today to make it more fun or safer? (Creating) 10. How do different shoes (like sneakers vs. dress shoes or slippers) use friction to help us in different situations? (Analyzing)
Activities that require high levels of student engagement. Please describe the activities students do in the lesson that require high engagement levels. (These activities are more student-centered, requiring students to take moreresponsibility for learning.)	In this lesson, students actively participate in several student-centered activities that require them to take responsibility for their learning. • During the group experiment, students work collaboratively to predict, test, and observe how different surfaces affect the movement of themed objects. They are responsible for designing and conducting their experiment to achieve a specific goal, which keeps them engaged through hands-on learning and creative problem-solving. • Students use graphic organizers to record their predictions, observations, and explanations, encouraging them to think critically and document their learning process. These activities promote high engagement by fostering curiosity, collaboration, and ownership of learning outcomes.
Instruction	

Lesson Part	Description of Activities and Instruction(Teacher Does)	Description of Activities and Instruction (Students Do) What do you plan for students to do during the majorsteps of this lesson? Please make your numbers correspond to the numbered steps in the other columns.	Meeting Individual & Group Needs Plans instruction to meet the needs of individual students. Adaptations are tied to learning objectives. Consider ELL and other specific individual or group learning; includes requirements in IEP or 504 plans.
Opening: Describe the beginning of your lesson. This can include a hook/motivator, presentation of objectives, Essential Question, and/or introduction of topic. Additionally, relevance & connections must be made to prior learning, personal, cultural or community assets.	1. TTW display a presentation as a lesson aide 2. TTW introduce the topic of friction and remind students of the previous day's discussion. 3. TTW give a brief explanation of friction without front loading too much information. 4. TTW connect to interests and increase engagement by showing students a giant Bluey stuffed animal and explaining that it will be part of our experiment. 5. TTW introduce the lesson objective (in students friendly terms), the I Can Statement, and the key vocabulary through a presentation slide. 6. TTW briefly explain what the teacher and students will be doing in the lesson.	1. TSW wait quietly and patiently on the rig for the lesson to begin. 2. TSW listen to the introduction and recall key points from the previous day's discussion. 3. TSW listen to the teacher's explanation and observe examples provided 4. TSW respond with excitement and interest as they see the Bluey stuffed animal, increasing their engagement. TSW wonder how they could use Bluey in a science experiment. 5. TSW listen to the objective, I Can Statement, and key vocabulary as TTW presents it in student-friendly terms. 6. TSW listen to the activities the class and teacher will be engaging in.	1. Each slide contains simplified language and visuals to aid students in comprehension. This helps the struggling readers, as well as the students with IEPs. (Justification: easyCBM & prior observations) 5. TTW display the objective and "I Can" Statement visually to support comprehension for struggling readers. (Justification: easyCBM & prior observations)

Instructional Procedures/ Learning Tasks: Continue numbering your steps as they continue from the opening. Provide specific step-by-step details of lesson content aligned with objectives, utilizing a variety of teaching strategies.	7. TTW ask students to do a Think-Pair-Share and discuss what they know about friction and if they can provide an example of it. 8. TTW call on students to share the results of their discussions. TTW build on students' answers and state that friction produces heat. TTW ask: Why do you think friction creates heat? Can you think of a time when you felt heat caused by friction in real life? TTW call on students who volunteer, then ask students to rub their hands together to demonstrate how friction produces heat. 9. TTW display a KWL chart and write the students contributions on it. TTW ask guiding questions to discover what background knowledge students already have and what they want to learn. 10. TTW walk over to one of the assembled slides and ask students to make predictions about what will happen if Bluey is pushed down the slide. TTW acknowledge the predictions and send Bluey down the slide. 11. TTW place a piece of aluminum foil on the slide and ask students for predictions. TTW	7. TSW individually think about what they know about friction and how it affects objects. TSW then pair up with a partner to discuss their ideas and share any real-life examples they can think of. 8. TSW share the results of their Think-Pair-Share discussions with the class, providing examples of friction. TSW listen to TTW's explanation about friction producing heat and consider why friction creates heat. TSW volunteer to answer why friction creates heat and provide real-life examples of feeling heat caused by friction. TSW rub their hands together when instructed to experience the production of heat due to friction. 9. TSW contribute to the "K" (Know) section by sharing what they already know about friction and movement. TSW contribute to the "W" (Want to Know) section by sharing what they are curious about or want to learn regarding friction. TSW observe and listen as TTW writes their contributions on the chart. 10. TSW make predictions about what will happen to Bluey when pushed down the slide, considering factors like speed and the impact of the surface. TSW observe as Bluey is pushed down the slide, comparing their predictions to the outcome. 11. TSW make predictions about how the aluminum foil will affect Bluey's speed as it moves down the slide. TSW observe as Bluey slides down the foil-covered slide and listen to TTW's comments on the speed. TSW compare their predictions with the outcome. 12. TSW listen as the teacher models and explains the results of the experiment. 13. TSW discuss why Bluey sped up on the aluminum foil, offering reasons based on the smoothness of the surface. TSW make predictions about what might happen if sandpaper were used, considering how the rough surface might impact Bluey's speed. 14. TSW observe the graphic organizer example and listen to TTW's explanation of the activity. TSW note how TTW models the process of creating predictions, observations, and explanations with drawings. 15. TSW move to their assigned groups and work together to understand their objective (either to speed up or slow down an object). TSW examine the materials provided and discuss how they can use them to achieve their assigned	7. TTW pair struggling readers with peers who have stronger verbal communication skills to provide language support during the discussion. (Justification: easyCBM & prior observations) 9. TTW use visuals, such as pictures of objects in motion or surfaces, to prompt struggling readers during the "K" and "W" sections, making it easier for them to contribute. (Justification: easyCBM & prior observations) 15. The graphic organizer will contain sentence starters, images, and a word bank to support struggling readers in their observations and explanations. TSW be sorted using flexible and mixed ability grouping based on universal screening literacy data to pair struggling readers with stronger readers. (Justification: easyCBM & prior observations) 16. TTW check in frequently with struggling readers, providing positive reinforcement for their efforts and encouraging them to express their thoughts. This helps build confidence and ensures they stay engaged with the task. (Justification: easyCBM & prior

	model making predictions from observations and send Bluey down the slide, then comment on the speed. 12. TTW model interpreting the experiment's results with a think aloud. 13. TTW ask students why they thought Bluey sped up and what might happen if the used a different material like sandpaper. 14. TTW display an image of the graphic organizer students will be using and will explain that students will be working in groups to either slow objects down or to speed them up. TTW explain that students will create drawings for the three stages of their experiment: predictions, observations, and explanations. TTW show students the vocabulary bank on the explanations section and model drawing the results of the Bluey experiment labeling the drawing using at least three words from the box. 15. TTW separate students into their groups and direct them toward their slides, assign them their objectives, and show them the materials they will have to choose from. TTW encourage students to think creatively and try out multiple	goal. TSW experiment with different material combinations, making decisions as a group and adjusting based on observations. 16. TSW collaborate within their groups to carry out their experiments, testing different material combinations to achieve their assigned goal. TSW complete their graphic organizers by documenting their predictions, observations, and explanations in the three sections provided. TSW respond to questions from TTW, using their observations to think more deeply about their experiments and refine their understanding of friction.	observations)

	combinations. 16. TTW monitor student groups as they begin their experiments and complete their graphic organizers. TTW monitor the progress that groups make, offer guidance, and ask assessing and advancing questions to gauge students comprehension and progress their thinking forward.		
Closure: Continue numbering to describe the end of your lesson. Make clear connections to real-world situations and require studentsto reflect on and apply their learning through verbal or written expression.	17. TTW call students back to the carpet and return to the KWL chart. TTW ask students what new information they learned during their experiments. TTW record the answers in the KWL chart. 18. TTW connect the lesson to real world applications by asking reflection questions. o How do different shoes (like sneakers vs. dress shoes or slippers) use friction to help us in different situations? o If you were designing a playground slide, how would you use what we learned today to make it more fun or safer? 19. TTW distribute an exit ticket that allows students to	17. TSW return to the carpet and participate in the group discussion. TSW share what they learned during their experiments, including how different surfaces affected their objects' speed and what they observed about friction. TSW contribute to filling in the "L" (Learned) section of the KWL chart by providing insights from their experiments. 18. TSW listen to the reflection questions and think about how the lesson applies to real-world scenarios. TSW discuss and provide examples of how different shoes use friction to help in various situations. TSW reflect on how they would use their understanding of friction to design a safer or more enjoyable playground slide. 19. TSW complete the exit ticket by answering questions that apply their understanding of friction to real-life situations, such as how friction helps or hinders movement in daily activities. 20. TSW listen and imagine what they will learn during their next science lesson.	19. The exit ticket will contain visuals and simplified language that is accessible for all learners. (Justification: easyCBM & prior observations)

	apply what they've learned about friction and motion. and how it affects everyday life. 20. TTW express pride and excitement in everything the students have learned and about how creatively they applied their scientific thinking. TTW say that they cannot wait for the next lesson, where we learn all about how friction produces heat and the reciprocal relationship with motion.		

Material/Resources: What do you need for this lesson? Identify, within a bulleted list, the specific resources that you will use. Describe how these materials add value, depth, and extend students' learning.	**Technology:** Describe the technology you plan to use in your lesson. How does theidentified technology in your lesson improve student learning? If applicable, (c) explain how you will use this technology to support a variety of student needs within the learning environment, and (d) If you used this technology to design and implement formative and/or summative assessments, please explain. Did you use the technology to collect and/or analyzeyour data to inform instruction? Explain.
• **Giant Bluey stuffed animal (32"):** This giant stuffed animal creates engagement and gets students excited about the lesson they will be learning. • **Slide or ramp (can be a smooth plastic slide or a long board propped up):** Provides a hands-on, physical model that allows students to experiment with and observe the effects of friction in a concrete way. • **Different surface materials (e.g., sandpaper, wax paper, terry cloth, felt, foil, bubble wrap, satin):** They provide opportunities for students to observe and compare how different surfaces affect the speed of an object, fostering an understanding of the cause-and-effect relationship in a tangible way. • **Tape to attach varied surface materials:** Allows students to experiment with different surfaces by securing them to the slide, enabling controlled investigations. • **Themed objects (animals, sports items, Harry Potter toys, video game figurines, etc.):** Using objects connected to student interests increases engagement and personalizes the learning experience. • **Graphic organizers for each group:** Promotes reflection and self-assessment by prompting students to compare predictions with actual outcomes and explain their observations, thereby	• **Canva**: Canva is used to create graphic organizers, exit tickets, and visual presentations for the lesson. By providing clear, well-organized graphic organizers, Canva supports students in documenting their predictions, observations, and explanations. This documentation serves as a formative assessment, allowing the teacher to monitor student progress in real time and provide feedback. The presentation also helps assess students' engagement and understanding through class discussions prompted by visual content. The visual supports from Canva help ensure that students understand the expectations and sequence of activities, making it easier for the teacher to assess their understanding during each stage of the experiment. • **BoxLight**: BoxLight is used to display the KWL chart and graphic organizers. It allows for an interactive element, enabling students to see their own contributions recorded in real time. This serves as a formative assessment by gathering student responses during the lesson, which the teacher can use to gauge prior knowledge ("K"), set goals ("W"), and document what was learned ("L"). Additionally, BoxLight can be used to model how students should fill in their graphic organizers, and TTW can annotate as students share their results, providing immediate formative feedback.

solidifying their understanding.

- **Pencils, crayons, or colored pencils:** Allows students to represent their ideas visually, adding a creative element to their work.

Management: Explanation of processes and/or procedures, transitions from one activity to another, strategies for gaining attention, motivating students to engage in the lesson and focus on learning (e.g., work boards, posted procedures, modeling, positive feedback, redirection). If management decisions were addressed above, please underline those processes and procedures.

These procedures, transitions, attention grabbers, etc., are known to students and are part of the everyday classroom instructional process (unless noted otherwise).

- **Procedures**
  - **Arrival Procedure:** Students enter the classroom quietly, hang up their belongings, and take their seats to begin the morning activity.
  - **Materials Distribution:** Materials for the experiment (e.g., surface materials, themed items) will be distributed by designated classroom helpers, ensuring an orderly process.
  - **Listening Procedure:** When the teacher is providing instructions or explanations, students are to sit quietly in their assigned listening spots, focus on the speaker, and raise their hands to ask questions.

- **Transitions**
  - **Go to Your Seats:** Students are to quickly and quietly move to their assigned desks and await further instruction.
  - **Go to Your Listening Spots:** Students have assigned squares on the carpet that they sit on every time they are called to the carpet.

- **Strategies for Forming Groups**
  - **Carpet Partners:** Students have assigned partners for when they are on the carpet. When the teacher says, "Turn and talk to your listening partner," they know who to confer with. In the case of absences, unpaired students are paired with other unpaired students or with the teacher if no other students are available.
  - **Experiment Groups:** The strategy for forming experiment groups is different in this lesson, as students are being paired by their interests (animals, sports, Harry Potter, video games) and strengths (considering struggling readers). TTW assign groups to ensure a mix of students who can support each other, promoting peer learning while engaging students through their interests.

- **Attention Grabbers**
  - **Clap Pattern:** TTW make a series of five claps in a specific pattern, which students then repeat. This gets students' attention quickly and brings focus to the teacher. (This attention grabber is specific to Ms. Allison's classes and students are expected to respond to whoever is delivering them.)
  - **"Class Class" Call and Response:** TTW say, "Class Class," and the students will answer with "Class Class." This ensures all eyes are on the teacher and students are ready for the next set of instructions. (This attention grabber is specific to Ms. Allison's classes and students are expected to respond to whoever is delivering them.)
  - **Themed Call and Response:** For fun and variety, TTW say, "Who lives in a pineapple under the sea?" and students respond with, "SpongeBob SquarePants!" These add an element of playfulness, especially effective for engaging young learners. This themed attention grabber is unique to the student teacher and students are expected to respond when it is used. Students were given a choice of themes relevant to them and they chose the SpongeBob theme.
- **Motivation**
  - **Exciting Experiment with Bluey:** The use of a giant Bluey stuffed animal is highly engaging and relatable, sparking excitement and curiosity about the experiment.
  - **Themed Groups and Items:** By forming groups based on student interests and using themed objects, students feel a personal connection to the activity, increasing their enthusiasm and engagement.
  - **Student Love for Science:** The students already enjoy science and are always eager to conduct experiments. The lesson builds on this natural interest, which serves as intrinsic motivation.
  - **Special Surprise:** TTW promise students a special surprise at the end of the lesson if they demonstrate good listening and behavior to adding extrinsic motivation for positive behavior.

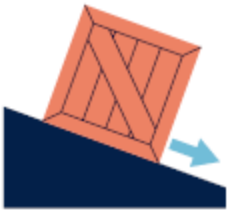
SCIENCE FOCUS ON SAFETY – What safety precautions will be used specific to any lab activities?

- **Supervised Use of Slide/Ramp:** Ensure that all students are supervised while using the slide or ramp to prevent any falls or unsafe behavior.
- **Clear Workspace:** Keep the workspace clear of obstacles to prevent tripping hazards during the experiment.

- **Group Size Management:** Limit the number of students around the slide at any given time to prevent overcrowding and ensure that all students have adequate space.
- **Controlled Object Handling:** Remind students to only release their objects gently on the slide and not throw or force them, as this could cause injuries.
- **First Aid Readiness:** Have a basic first aid kit nearby in case of minor scrapes or irritation from handling materials.
- **Instructions on Safe Movement:** Remind students to walk, not run, during the activity to prevent accidents.

See Modified Assessment Below:

It's not Science Friction



Draw what you think will happen (prediction), what you see (observation), and why it happened (explanation).

Use words from the word bank to label your explanation drawing.

Predict

Draw what you think will happen.

Helpful ideas:

I think the object will stop because...

The slide will make it go fast because it is...

Observe

Draw what you see happening

Helpful ideas:

I saw Bluey move (fast/slow) because...

The object went (quick/slow) on the...

Idea

Try it out

What happened?

Word Bank

Friction: The force that makes things slow down when they rub together.

Motion: How something moves.

Surface: The outside of something you can touch.

Resistance: What makes it hard for something to move.

Explain

Draw what happened

Helpful ideas:

It moved this way because the surface was...

I learned that friction can make things...

Great Job Scientists!