

# 2024 BRYANT WOODS ELEMENTARY SCIENCE FAIR PACKET

The Science and Invention Fair is an optional activity for all Bryant Woods Elementary School students. Students can participate by choosing one option below.

1. **COLLECTION** - Share a group of objects that you have collected.
2. **INVENTION** - Create or design something new.
3. **SCIENTIFIC INVESTIGATION** - Ask a question and make an experiment to answer that question. See below for sample questions.

Students who participate will choose either a **collection, scientific investigation or invention** to present at the science fair. They can work alone or with a partner but the students should do most of the work. Adult help should be given if safety is an issue and to support students with 504/IEP accommodations. Obviously, younger children will need more support than older children.

Each student or group that completes a project will display their work at the Science Fair in the school cafeteria. We recommend using a tri-fold display board but you can also use large poster paper. Please see the information below to help guide your project.

**PLEASE READ THE INFORMATION BELOW AND TURN IN YOUR REGISTRATION FORM BY FEBRUARY 20th, 2024.**

## Parent Guidelines

The choice of project should be left to the student to create a sense of ownership and pride around the investigation. Here are some guidelines you can follow to help your student(s) during the process:

- Be a supportive coach.
- Guide your child during the brainstorming session, ask questions, and provide positive feedback.
- Encourage them to get started earlier, to ensure it is enjoyable and not stressful for them and for you.
- The Science Fair is a night to celebrate students' hard work and creativity. Get excited! Encourage them! Let them know you are proud of their hard work!

# SCIENTIFIC INVESTIGATION

1. **Choose a topic that interests you.** One place to start is by asking a question about the things you do everyday. Which ball can you throw the farthest? Can you grow a plant from the seeds in your food? Can your family tell the difference between different flavors of skittles?
2. **Research your topic.** Read books/websites on the topic. Make observations by simply looking at things, talk to people, and find out as much as possible about your topic. Keep notes on where you get information so you can cite your resources.
3. **Plan your project.** What experiments will you do? How will you measure the results? Be sure to keep notes and write down everything you do and what happens.
4. **Form a hypothesis.** What do you think will happen in your experiment?
5. **Conduct your experiments.** Remember, the more times you do an experiment the more reliable and accurate the results will be. Use something to measure your experiments: a ruler or yardstick if you are measuring distance, a clock to measure time, etc. Check the measurements to be sure you are correct. Consider doing each experiment at least three times and get an average of the results for your display.
6. **Draw conclusions.** What did you learn from your experiments? Have you proved or disproved your hypothesis? You don't lose points if your guess turns out to be wrong.
7. **Display your work.** Below is an example of how to organize your board. You do not need to follow this exact format.

<p>Materials</p> <ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>	<p><b>PROJECT TITLE</b> Student name and grade</p> <p>Hypothesis</p>	<p>Conclusions</p>
<p>Procedure</p> <ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>	<p><b>RESULTS</b></p> <p>Use graphs, charts, or pictures to illustrate your results.</p>	<p>Acknowledgements</p>

# COLLECTION

Choose a group of objects to share. Some examples of a collection are rocks, shells, or coins. Research some interesting facts about the objects in books or on the internet. What are some similarities and differences between the objects? What are some objects you would like to add to the collection? Below is a sample display board.

FACTS: What have you learned in researching your collection	<b>COLLECTION NAME</b> Student Name and Grade	WHY COLLECT? Reasons why you collect this particular object
	DESCRIPTION of your collection	GOALS: Objects you would like to add to make your collection complete

# INVENTION

1. **Plan your invention.** This can be an invention that helps you with your everyday life, a model that helps you understand the world around you, or something else that you want to create!
2. **Gather materials.** Keep a list of what you use to create your invention.
3. **Build your invention.** Write down the steps you take and any problems that arise while making your invention.
4. **Use your invention.** Does it work as intended? How can you improve or modify it?
5. **Make your display.** Use the set-up below as a guideline.

<b>Materials</b> 1. 2. 3.  <b>Approach</b> 1. 2. 3.	<b>INVENTION TITLE</b> Student name and grade  <b>INVENTION</b> Drawings, photographs, descriptions, etc.	<b>Conclusion</b> Did your invention work as intended?  <b>Biggest Challenge</b>  <b>Acknowledgements</b>
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