Big Idea/Topic

Using Robots to Help Identify the National or State Flag

Connecting Theme/Enduring Understanding:
**Beliefs and Ideals:** The student will understand that the beliefs and ideals of a society influence the social, political, and economic decisions of that society.
**Conflict and Change:** The student will understand that when there is conflict between or within societies, change is the result.
**Culture:** The student will understand that the culture of a society is the product of the religion, history, beliefs, customs, traditions, and government of that society.
**Time, Change, Continuity:** The student will understand that while change occurs over time, there is continuity to the basic structure of a society.

Essential and Supporting Questions:

**EQ:** What does our flag (national or state) look like?

**Supporting Questions:**
1. Why does our flag look the way it does?
2. What choices were made in designing our flag?
3. How might a flag make people feel about our country or state?
4. Why do we use flags?

Standard Alignment

SSKH2 Identify the following American symbols:
a. The national and state flags (United States and Georgia flags)

Connection to Literacy Standards for Social Studies and Social Studies Matrices

Information Processing Skills –

1. Compare similarities and differences
6. identify and use primary and secondary sources
Instructional Design

This lesson has a flexible timeline and may cross over several days.

Overview: Students will use any of the robots that are designed to follow a marker drawn line to identify the parts of our national or state flag. Additionally, students will collaboratively research facts about our national or state flag and “program” their robots to stop at key points on an illustration of a flag to share their favorite facts. Lastly, students will compare and contrast the US flag to the State Flag of Georgia.

Materials:

Note: To make this lesson accessible to all students, a set of printable template lines are provided below for those that may not yet have the fine motor skills to complete this lesson without them however, this is a great activity for motivating students to work on those very skills as the robot will be a great “feedback” tool for how well they drew their lines. Teachers may wish to allow students a little bit of productive struggle time before providing the printed lines. The same guidelines would apply to how much help a student is given cutting out and gluing down the lines.

- a black and white outline or coloring page of either the United States of America flag or the State Flag of Georgia
- one robot per pair or triad of students
- one appropriate marker set (or preprinted line templates) per pair or triad
- optional: a device to visit the web pages for research or a printout of key parts. Alternatively, the teacher can display the web sites and do research in the large group

Note: If your robots need calibration, consider doing this before distributing unless you feel your groups can learn how to do that. Ideally, teaching students how to do this will streamline future lessons you may wish to use them for.

Opening:

Gather students in an area where they can see the classroom flag. Consider taking the flag down and allowing them to touch it and even explain how you are handling it in a way that shows respect (not letting it drag on the ground, etc.). Use the graphic provided below to give visual reminders as you ask them what they see when they look at the flag. After you have gathered sufficient answers and written them on the board or chart paper, ask them what they think, and finally, what they wonder. Guide students in group counting the number of stripes. As an extension, groups that are able can group count the stars in the large group or in a differentiated small group.

Additional support option: Depending on the supports your students may need, consider doing the opening activity in small, collaborative groups allowing for some groups to work independently while others have teacher guidance. Give each group a color printout, magazine clipping, or poster of the flag. For an even more kinesthetic experience, provide small, handheld flags (you may even be able to find some groups that would donate a set for your classroom). Allow students to explore the flag for 5 minutes or so, count the stripes and talk about what they already know. Have groups share what they talked about.
Activity

Part 1:

Explain that they are going to work with a special friend to explore and learn about our flag. Present the robot and explain that our friend is a little robot and it is pretty easily hurt or broken so we have to treat it carefully. Some good rules to introduce to prevent robots being dropped or stepped on are:

1. Don’t distribute the robots until groups are ready to work with them
2. Be sure students have all supplies they will need before they begin work and have used the restroom
3. Assign groups to specific areas on the floor (either not on carpet, or put down large pieces of cardboard, drawing boards, large books or some other firm surface for them to work on). You may need to put down bulletin board paper to protect surfaces from stray marker marks or bleed through.
4. Consider some fair way to share programming and running the robot – time limit or specific task completion and then switch

For the students

1. Once you have your robot, stay seated on the floor in your area – no walking around the room
2. Raise your hand if you need something – don’t walk over and ask
3. You must stay seated on the floor while working with the robot – don’t carry it around
4. Take turns using the robot and ask for someone to hand it to you – no “tug of wars”
5. Groups that aren’t showing care for the robot may have to do a different activity
6. When you are not using the robot, it must go back in its box

Once students understand the rules (an accessible version of these rules is provided below for you to post or give to each group), demonstrate how to use the marker to draw a path on a piece of scrap paper. Explain some of the characteristics of the line you drew (fat, no gaps, no really sharp turns, etc.) and consider showing them some examples of lines that might cause the robot to have problems. Show how to turn on the robot and set it on the line and let them watch it follow the line.

Demonstrate adding colored blocks to the line (not programing – just colored sections of line to show that the robot can “read” the color.

Break students into pairs of triads (much bigger than 3 in a group and students will be more likely to argue over whose turn it is). Provide them with a charged and calibrated robot, some scrap paper, chart paper, or bulletin board paper and ask them to explore drawing different types and colors of lines and running their robots on them. Ask them to explore what types of lines work and what doesn’t. Let them try making lines with different colored sections to see what their robot does (or doesn’t do). Provide template lines (provided below) to cut out and glue down for students that cannot draw a line of sufficient quality for the robot to follow. Once students have a feel for how to create lines the robots can follow, proceed to part 2

Part 2:

Note: Areas colored with crayons or colored pencils can have a “waxy” surface that may resist the wet marker lines draw on them. It may be preferable for students to draw the marker paths the robot will follow across the flag first and then allow them to color the flags after.

Provide students with a black and white outline or coloring page of the United States of America flag. Free printables can be found here and here or you can search for your own using the query “free coloring page US flag” online as there are many to choose from. Try to choose one that does not have heavy or bold lines as these may confuse the robot.
If you plan to use this lesson with robots that follow a thick marker line, consider using this flag template as the lines are thin enough the robots usually don’t “see” them and start to follow them instead.

Once students have practiced on blank paper, give them the printout of the flag and have them draw and code the path they want their robot to follow across their flag drawing. To make it more challenging, ask students to use the colored markers to make the colored light on the robot (if it has one) change to show the same color as the part of the flag it is traveling over. Students could practice counting skills by “coding” the robot light to turn red for every red stripe. In other words, draw a marker path down their flag that alternates red and black with the red line only over the red stripes and the black line over the white stripes. As the robot travels down the path, they can count the number of red stripes by counting every time the robot light turns red. Repeat for the white stripes. Students could answer which are there more of? How many stars are there? And so forth. Allow students to present their programs to other groups while their share what their robot is doing and why.

**Part 3:**

Once students have mastered basic path drawing and color coding, it is time to add some inquiry and depth. Select a good read-aloud book or online story about the meaning and symbolism of the flag or about its history. Alternatively, or additionally have students do some research using appropriately leveled trade books or web site (some possibilities are provided below) on our flag. Here are some possible questions you could have them find the answers to:

- Has our flag always looked the same? Why did it change?
- What do the stripes stand for?
- What do the stars stand for?
- Share some facts about our flag (some resources are provided below) and have students share which fact is their favorite and why.

**Potential Resources:**

DISCLAIMER The books used as examples for the Georgia Home Classroom’s Digital Learning Plans were selected by Georgia teachers to reinforce skills and knowledge found within the Georgia Standards of Excellence. The Georgia Department of Education (GaDOE) cannot and does not endorse or promote any commercial products, including books. Therefore, the books that were selected serve as examples and are not endorsed or recommended by the GaDOE. Please remember that when selecting books to support instruction, Georgia’s public school teachers and leaders should consult their local school district’s policy for determining age and content appropriateness for their students.

Fun Flag Facts: [https://kids.kiddle.co/Flag_of_the_United_States](https://kids.kiddle.co/Flag_of_the_United_States)


“The United State Flag” A Pre-Kindergarten read along: [https://www.youtube.com/watch?v=Xc1tasiKf0w](https://www.youtube.com/watch?v=Xc1tasiKf0w)

See resources below for an “unplugged” printable fact sheet about the US Flag

Allow students to practice creating lines using the color “codes” provided with the robots that make it perform actions like slow, fast, spin, tornado, etc. Give students a new copy of the flag drawing and allow them to color code a path around their flag that has some actions in it. When the robot performs the action, the student shares a fact about the flag.

Give students time to color in their flags and then post in the classroom.
Closing:
Gather students in the same manner as in the Opening and give students the opportunity to share their robots running their programs. Have students share what their favorite part of each program is and why, as well as their favorite flag fact.

Ask students:
1. to describe our flag and explain what the different areas of it stand for (why does it have 50 stars, why the stripes?)
2. to talk about some ways we show respect for our flag, what it means to them, or how it makes them feel.
3. To share how a flag might make people feel about our country or state
4. To describe some of the places or events we might see our flag and why they are there

Opportunities for Extension:
Students could:
write a simple poem about what the flag means to them
fill in an Acrostic poem for U – S – F – L – A – G or “my flag” or other expression related to the flag
Compare and contrast the first known flag (the “Betsy Ross” flag) with the current flag
See additional GaDOE sample lessons about our flag in Unit 7 – You’re a Grand Old Flag on the Georgiastandards.org Social Studies website.
**Ideas for Differentiation:**

Our goal is for all students to be actively engaged using speaking, writing, illustrating, reading, and listening. Below are changes to the lesson to help achieve that goal for students who need additional support. Note: Be careful using these lessons for all students. If students are able to complete the activities on their own, it would be best to let them do this independently.

- Printable line templates are provided below for students that may not have the fine motor skills to complete this activity without such support
  - It is preferable for students to draw their own lines and code blocks so that they will have to “troubleshoot” their code, but if you have some students who simply have not developed the fine motor skills needed to do this, consider giving them pre-cut, thin strips of colored construction paper or print out colored code blocks they can glue down instead. Additionally, some “fill in the blocks” templates are provided below.
- Allow students to illustrate their flag facts to supplement their explanations
- Offer audio books or online video books for research support
- Make Part 1 of this lesson a separate lesson done in small guided groups for students that may need additional support with the technology or more practice time with the fine motor skills required.

**Evidence of Student Success**

As a result of this lesson, students should be able to recognize and describe our national and state flags, count the number of stripes and understand that the stars represent the number of states in our country.

**Engaging Families**

Materials included to support unplugged learners:

Optional materials to support learning not included: blank paper,
See, Think, Wonder Image Analysis Graphic:

What do you SEE?  What do you THINK?  What do you WONDER?

What do you SEE?  What do you THINK?  What do you WONDER?
See, Think, Wonder Comparison Graphic:

What do you SEE?

What do you THINK?

What do you WONDER?

What is the SAME?
<table>
<thead>
<tr>
<th>Rule</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sit down</td>
<td><img src="image" alt="Girl Sitting" /></td>
</tr>
<tr>
<td>Don’t walk with the robot</td>
<td><img src="image" alt="No Walking" /></td>
</tr>
<tr>
<td>Raise your hand to ask</td>
<td><img src="image" alt="Hand Raised" /></td>
</tr>
<tr>
<td>Take Turns</td>
<td><img src="image" alt="Three People" /></td>
</tr>
<tr>
<td>No grabbing</td>
<td><img src="image" alt="No Grabbing" /></td>
</tr>
<tr>
<td>Put it in the box</td>
<td><img src="image" alt="Box" /></td>
</tr>
</tbody>
</table>
Our flag is red, white, and blue.
Our flag has thirteen (13) stripes.
Seven (7) stripes are red.
Six (6) stripes are white.
Our flag has a blue rectangle in the corner.
The rectangle has fifty (50) stars in it.
There is one star for each state in the United States of America.