

Beginning Scratch Lesson Plan

“Bouncy Bounce”

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GOALS

- Learn the basics of computer animation and programming using Scratch.
- Learn Scratch skills that will lead into the Pong Game lesson.

BIG IDEAS

Have children learn how to take some basic scratch skills and use their own ideas and inventiveness to create an interactive scratch environment.

SKILLS TO LEARN

- How to draw your own sprites and backgrounds
- Graph aspects of Scratch
- In the Control section --- “when green flag clicked”, “forever”, “if”, “wait”
- In the Motion section --- “point in direction”, “bounce”, “move # steps”, “go to coordinates”
- In the Looks section – “switch costumes”, “change”, “show”, “hide”, “say”

If time and experience level allows introduce:

- Compass aspects of Scratch (use activity brochure as a guide)
- “Broadcast” command (when I receive)
- “Touching” command (In the Sensing section)
- “Pick Random” command (In the Operators section)

MATERIALS

- All computers installed with Scratch
- Bouncy Bounce Activity Idea Sheets for each participant
- Very basic example of Bouncing Sprite
 - no art detail to allow their creativity to come from unique place
- Your own working examples of the lesson to reference if needed. Don’t show this at the beginning of the lesson, so children develop their own ideas.

ACTIVITY PLAN

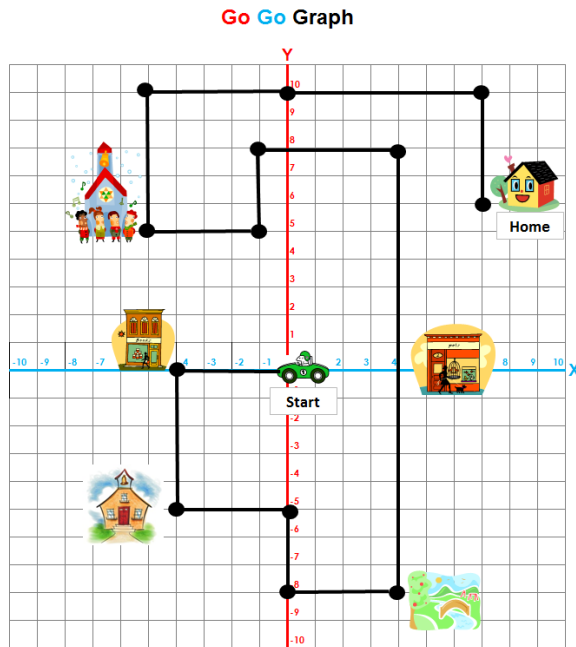
WARM UP ACTIVITY:

GO GO GRAPH game

Materials:

- Go Go Graph Sheet
- Crayons or markers
- Sample road maps for leaders eyes only

GO GO Graph Example:



This is just an example teachers create their own roads, and shapes, and other creative ideas.

Participants can draw their own pictures of the neighborhood etc.

Preparation: Choose different points on the graph and draw a road map from (0,0) to your destination point coordinates. Make various road maps of different levels of difficulty. See above example.

Additional Ideas:

- Have the road make a pattern like a star, geometric shape etc.
- Have put pictures on your road to make it more interesting along the way.

Introduction: Explain how a Cartesian graph is set up and what coordinates are.

How to Play the Game:

- Each participant draws a small vehicle on (0,0).
- Leader gives out coordinates to each leg of the road map or states, go left, right, up or down. Or use minus and plus to give directions, so they get the idea of how to make a Scratch Sprite move in a positive or negative direction.
- You can make the journey more fun by giving different stops names examples (school, park, grocery store, community center, etc.)
- Participants map the road as they go, the players who get to the correct destination or shape are the winners.

THE ACTIVITY

- Break up your class room into small groups so that each teacher has a similar number of students.

- Have each teacher introduce the basics of Scratch, a little at the beginning and more as they go along. Sneak in the explanations as they develop their Scratch environment and when they ask questions or need help moving forward.
- Reference Skills to Learn section above to know what to include.
- Reference the Bouncy Bounce Activity Ideas Brochure as they proceed with their creation.
- Encourage participants to provide explanations for each other.
- When they are learning about creating and switching costumes might be a natural time to talk about what animations are.

Activity Flow

1. **Draw a ball or object to bounce (Sprite)**
2. **Make it bounce off the edges of the Scratch screen**
3. **Add another Sprite**
4. **Add additional costumes for your Sprite(s)**
5. **Have something happen when the sprites touch each other**
6. **Change the look of your Sprites in different ways**
 - **Switch Costumes to animate**
7. **Change the position of your non bouncing sprite using (x,y)**
8. **Add sounds to your Sprite(s)**
9. **Create a background(s) for your Sprites**

Additional Challenges if time and experience allows

- **Send a broadcast message and make something cool happen**
- **Explain and work with Scratch as a compass and angles**

CIRCLE UP:

Have each group share their creations and talk about what they learned.