

## Technology Enabled Learning Classroom Catalyst

**Title:** Spice up Assessment with Plickers

**Tech Tool:** Plickers

**What is this?** Plickers is a powerfully simple tool that lets teachers collect real-time formative assessment data without the need for student devices

**How do I use this?** <https://plickers.zendesk.com/hc/en-us>

**Why use this?**

- Plickers allows real-time formative assessment collection
- Plickers does not require the use of student devices
- Plickers allows students to receive real-time feedback on their understanding and allows teachers to revisit concepts quick and efficiently
- Plickers requires very little set-up time compared to other quiz applications like Kahoot

**Internet Safety:** Make sure that you and your students are safe when using technology in the classroom. This can include monitoring students to ensure that they are not using other applications and reminding them about school rules of online conduct.

**Course Code:** SNC2D

Topics	Timing
Climate Change	Preparation: 15 mins + 60 mins (between classes) Lesson: 2 classes (1 for creating material, 1 for class review with end result)

**Specific Expectations:**

D2.1 use appropriate terminology related to climate change, including, but not limited to: albedo, anthropogenic, atmosphere, cycles, heat sinks, and hydrosphere [C]

D3.1 describe the principal components of Earth's climate system (e.g., the sun, oceans, and atmosphere; the topography and configuration of land masses) and how the system works

D3.2 describe and explain heat transfer in the hydrosphere and atmosphere and its effects on air and water currents

D3.3 describe the natural greenhouse effect, explain its importance for life, and distinguish it from the anthropogenic greenhouse effect

D3.4 identify natural phenomena (e.g., plate tectonics, uplift and weathering, solar radiance, cosmic ray cycles) and human activities (e.g., forest fires, deforestation, the burning of fossil fuels, industrial emissions) known to affect climate, and describe the role of both in Canada's contribution to climate change

D3.5 describe the principal sources and sinks, both natural and/or anthropogenic, of greenhouse

gases (e.g., carbon dioxide, methane, nitrous oxide, halocarbons, water vapour)

D3.6 describe how different carbon and nitrogen compounds (e.g., carbon dioxide, methane, nitrous oxide) influence the trapping of heat in the atmosphere and hydrosphere

D3.7 describe, in general terms, the causes and effects of the anthropogenic greenhouse effect, the depletion of stratospheric and tropospheric ozone, and the formation of ground-level ozone and smog

D3.8 identify and describe indicators of global climate change (e.g., changes in: glacial and polar ice, sea levels, wind patterns, global carbon budget assessments)

## Introduction

After learning an entire unit, many students find it a daunting task to work through assigned review questions to prepare for final evaluations. One of the many strategies that we use in teaching to allow students to be accountable for their learning is to co-construct criteria in evaluations or assignments. One option that we can incorporate with Plickers is to have students co-construct review questions that the class can use as review and, if possible, teachers can use in final evaluations as an incentive for student work.

## Materials

Lesson material from Climate Change Unit

1 device per pair or group, if available

## Teacher Set-Up

1. Set up your Plickers account and add your student list.
2. Within your Plickers account you can create sub-folders for specific topics to help organize your questions
3. In order to use this lesson, students will need to have learned all major concepts from the Climate Change unit.

## Lesson Plan

Description	Time
Teacher introduces the purpose of the lesson which is to create review questions as a class.	5 mins
Provide students with a list of subtopics that you would like them to create questions about. Students can break into pairs or groups to work on questions based on a part of these subtopics. Students will take the allotted time in class to create multiple choice questions. Working in pairs or groups will allow them to check each other's work before submitting the questions (with answers) to the teacher. Students will submit their work at the end of the period (digitally, if possible).	60 mins

Before the next class, the teacher will need to transfer the student-created questions into the Plickers application online. (This may take some time depending on the number of questions submitted as the Plickers.)	30-60 mins (prep time)
During the following class, students can work through the student-created questions in preparation for upcoming evaluations using Plickers!	30-45 mins
Provide a Plickers Scoresheet to students for formative feedback about their progress with the topic. Students can use these scoresheets to focus their efforts on areas of need.	

<p><b>Instructional Strategies</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Brainstorming</li> <li><input checked="" type="checkbox"/> Computers</li> <li><input checked="" type="checkbox"/> Cooperative</li> <li><input checked="" type="checkbox"/> Group Work</li> <li><input checked="" type="checkbox"/> Questioning</li> <li><input checked="" type="checkbox"/> Written Exercise</li> </ul>	<p><b>Assessment Strategies</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Questioning</li> <li><input checked="" type="checkbox"/> Quiz/Test</li> <li><input checked="" type="checkbox"/> Computers</li> <li><input checked="" type="checkbox"/> Discussion</li> <li><input checked="" type="checkbox"/> Participation</li> </ul>	<p><b>Character Education</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Courage</li> <li><input checked="" type="checkbox"/> Empathy</li> <li><input checked="" type="checkbox"/> Fairness</li> <li><input checked="" type="checkbox"/> Initiative</li> <li><input checked="" type="checkbox"/> Perseverance</li> <li><input checked="" type="checkbox"/> Respect</li> <li><input checked="" type="checkbox"/> Responsibility</li> </ul>
<p><b>Strands</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Knowledge/Understanding</li> <li><input checked="" type="checkbox"/> Communication</li> </ul>	<p><b>Learning Skills</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Teamwork/Collaboration</li> <li><input checked="" type="checkbox"/> Organization</li> <li><input checked="" type="checkbox"/> Work Habits</li> <li><input checked="" type="checkbox"/> Initiative</li> <li><input checked="" type="checkbox"/> Self-Regulation</li> </ul>	<p><b>Resources/Equipment</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Computers/iPads</li> <li><input checked="" type="checkbox"/> Laptop/LCD</li> </ul>

### Safety

No safety issues.

### Teaching Suggestions/Hints

- Plickers allows the collection of student data on how they performed on all generated questions This feedback could be provided to each student to help them focus on areas of

- need.
- Use plicker data to revisit concepts students had particular difficulty with.

### **Next Steps/Extensions/Other Topics for this Tech Tool**

Next Steps for this lesson can include:

- Instead of using this for review, you can use plickers to assess previous student knowledge to start a unit using previously created questions..
- Create questions throughout the unit and revisit topics to ensure student understanding of the material

Other topics that can be taught using this tool include:

- Plickers can be used for any topic or subject that requires multiple choice answers.
- Try using it with Chemistry with topics like identifying reactants or products in chemical reactions.
- Try using it with Biology - an example would be importing images to identify stages of mitosis

### **Additional Resources**

- Accessing Plickers reports  
<https://plickers.zendesk.com/hc/en-us/sections/202541257-Reports>