**Subject area/course**: Science / Life Science

**Grade level/band**: 9th

**Task source**: SCALE and The New York City Teacher Design Team; Author: Michal Lomask

**The Health Effects of Cell Phone Use**

**TEACHER'S GUIDE**

1. **Task overview**:

In the Science, Technology and Society Position Paper tasks students will explore issues related to the impact of science and technology on society and the environment. Students will search the internet for relevant and credible scientific data. Based on the data they collect, they will make claims and support them with evidence. After taking a side on the issue under debate, students will participate in a class debate, in which they will argue their position and listen critically to other students’ presentations. A culminating activity of this project will be the writing of a short, five- paragraph position paper, describing and supporting their opinion on this issue.

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| **Overall Assessment Structure** |
| Session 1: | Introduction (Lead-In)-Intended to introduce students to the topic being addressed in the final paper. Also meant to orient students to internet research practices that yield valid and useful information. |
| Session 2: | Internet Research (Lead-In)-Intended to give students the opportunity to spend time searching the internet for valid and useful information.Students document their searches and keep track of relevant information. |
| Session 3: | Classroom Debate (Lead-In) – Intended to give students the opportunity to generate key discussion points to use in their Position Papers. |
| Session 4: | Assessment of Writing (Task) – This day represents the day where students write the final task which will be submitted for scoring. |

1. **Aligned standards:**
2. **Other standards**

The Science, Technology and Society Position Paper task was developed to address current science education standards that encourage teachers to teach students how to use the Internet effectively to locate reliable information, how to collect and evaluate evidence, and how to write concisely and objectively about science-related issues.

1. **Time/schedule requirements:**

This task will likely take four 45-minute class periods to complete.

1. **Materials/resources:**

The following items should be provided:

Session 1

Provided texts (student lead-in packet: Session 1)

Provided graphic organizer (student lead-in packet: Session 1)

Smart Board or chart paper

Session 2

Provided texts (student lead-in packet: Session 2)

Provided graphic organizer (student lead-in packet: Session 2)

SmartBoard or chart paper

Computer or tablet with internet access

Session 3

Provided texts (student lead-in packet: Session 3)

Provided graphic organizer (student lead-in packet: Session 3)

SmartBoard or chart paper

Session 4

Student response booklet

Notes from Sessions 1- 3

1. **Prior knowledge:**
2. **Connection to curriculum:**
3. **Teacher instructions:**

Teacher Guidance: **Session 1** Lead-in Materials

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| --- | --- |
| **Session 1** | Lead-In Materials Guidance Booklet |
| Purpose | * Provide an introduction to students about STS
* Plan for internet research
 |
| Materials | Provided texts (student lead-in packet: Session 1)Provided graphic organizer (student lead-in packet: Session 1) Smart Board or chart paper |
| Total Time | 45 minutes |

**(*45 minutes*) Session 1**

# (*25 minutes*) Activity 1: Understand STS and the issue of cell phone use via small group discussion

1. Break students into small groups. Instruct students to read the brief introduction in their booklets and discuss their own cell phone use. Ask students to determine how many people in their group use cell phones and determine approximately how much time they spend on cell phones.
2. Groups should then list possible reasons to limit cell phone use. Be sure that they consider both potential health dangers of cell phone use and other social implications of cell phone use.
3. Have each group share out briefly what ideas they came up with.

# Student Prompt for Activity 1

**ACTIVITY 1:** Discuss cell phone use in your small group: and respond to the following questions:

* How many minutes a day does each student use the cellular phone?
* How much time is spent on talking and how much time is spent on texting?
* What are some of the potential negative effects of cell phone use (e.g., health problems, distractions, and waste of time)?

In your science notebook, record and summarize the data from all students in your group. Create a visual (visual can be a graph or a picture or a funny cartoon) to display your data.

# *minutes)* Activity 2: Understand the basics of Internet research

1. Have students review the document in their student guide regarding internet research. Explain that they will be spending the next class period doing internet research on the potential health dangers of cell phone use. Explain that they will be using this information as part of their assessment so it will be important to do their best in getting reliable and relevant information.
2. Review the note taking worksheet with students to help prepare them for what they will write about at each site they visit.

# Close: Collect all materials to redistribute tomorrow.

**Student Prompt and Research Note Page for Activity 2**

Use the Internet to research health effects of cell phone use and record observations on the provided note taking template (use a separate template for every website you search and take information from). Use the research guide from Session 1 to help you get started.

Research Notes Page (use one page for each web site)

|  |  |
| --- | --- |
| What search engine did you use? |  |
| What keywords did you use in this web search? |  |
| What is the URL of the website? |  |
| Who is responsible for the content of this website?\* |  |
| In what date was the site/article uploaded or updated?\*\* |  |
| Does the site have a “mail-to” link for asking questions? |  |
| Based on the above, do you trust this website? Why? |  |
| List the main claims and supportive evidence that you learned from this website |  |

\*(usually found at the header, or bottom of the webpage, or can be researched at <http://www.whois.net/>)

\*\*If this information isn't volunteered, you can look at the file properties (hold the mouse over the link, right click, Properties), which will tell you the size and date of the file at the end of the hyperlink.

Teacher Guidance: **Session 2** Lead-in Materials

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| **Session 2** | Lead-In Materials Guidance Booklet |
| Purpose | * Use the Internet to research issues related to cell phone use
* Record learning in provided graphic organizers
 |
| Materials | Provided texts (student lead-in packet: Session 2)Provided graphic organizer (student lead-in packet: Session 2) SmartBoard or chart paper |
| Total Time | 45 minutes |

***(45 minutes)* Session 2**

# Activity 1: Use the internet to research the health effects of cell phone use and record observations on the provided graphic organizer.

**A.** Remind students of the discussion that took place during session 1. Reiterate any internet policies that may be relevant to your school. Guide them to the graphic organizer in their student work booklet that they will use to jot down important notes and sites they visit. It may help to do a sample search on an overhead or SmartBoard to show students how to determine what a credible website looks like (i.e. direct them to look for the author, the publication date, the facts cited on the page and links to other reliable sources, etc.).

# Close: Collect all materials to redistribute tomorrow.

Teacher Guidance: **Session 3** Lead-in Materials

|  |  |
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| **Session 3** | Lead-In Materials Guidance Booklet |
| Purpose | * Prepare a graphic organizer taking a position on cell phone use
* Organize a classroom debate to clarify position and ask questions
 |
| Materials | Provided texts (student lead-in packet: Session 3)Provided graphic organizer (student lead-in packet: Session 3) SmartBoard or chart paper |
| Total Time | 45 minutes |

***(45 minutes)* Session 3**

***(20 minutes)* Activity 1: Summarize research and take a position**

Tell students to take some time looking over their notes from the day before. Ask them to consider whether they would agree or disagree with the statement “Cell phones are bad for your health.” Let them know that their answer to that statement could be seen as a “position” in an argument. Instruct them to begin to craft their argument using the graphic organizer provided in their student booklets.

# (25 minutes) Activity 2: Engage in a class debate to clarify position and ask questions

**Prior to the debate, orient students to the tenants of an argument. Consider the following:**

1) Students may need help building an understanding of the concept of an argument as it is used here: a position on an important issue, backed up by evidence and reasoning. Some students may need help making the distinction between this meaning of argument and the everyday term for a noisy disagreement with two sides stubbornly holding on to their original positions.

To build up this understanding ask students work to work in pairs to discuss the following: There are two kinds of argument:

* A noisy disagreement with two (or more) sides stubbornly holding on to their original positions.
* A exchange on an important issue, where each speaker/writer uses evidence and reasoning to convince the other to consider a different point of view, choice, or action.

What happens in these two different kinds of exchanges?

* What strategies do people use in the first case?
* What strategies do people use in the second case?

If you can get your way in the first kind of argument, why does the second kind of argument matter (e.g., in court cases, in making significant choices for government,

Discuss with the class what approach they see as more valid or relevant for a class discussion or debate.

Then present the debate they will have based on the positions identified in their research. Have a student from each side state a claim and cite their evidence from the claim. Ask a student from the opposing side to refute the claim using evidence. Allow students to ask questions related to the claims stated and evidence cited. (Determine the best format for organizing the debate and having students present sides in a productive manner)

# Please see the task administration booklet for guidance on administering the writing prompt.

**Close: Collect all student materials.**

1. **Student support:**

When implementing the performance tasks with English Language Learners (ELLs) and Students with Disabilities (SWD), teachers should consider the following instructional supports.

# Vocabulary Building

ELLs:

* Provide student-friendly definitions, examples, synonyms, antonyms, multiple meanings, roots, affixes, pictures, diagrams, and translations prior to reading.
* Advise ELLs when words are cognates as cognate recognition is not always automatic when students are not proficient in both languages.
* Teach academic language and create purposeful opportunities for students to practice using the words and phrases.

SWDs:

* Provide student-friendly definitions, examples, synonyms, antonyms, multiple meanings, roots, affixes, pictures, diagrams, and regalia prior to reading.
* Provide visual representations prior to teaching and reading of content area material.
* Explicitly teach word origins, roots, prefixes, and suffixes.
* Teach academic language and create purposeful opportunities for students to practice using the words and phrases.

# Reading Comprehension

ELLs:

* Elicit prior knowledge and build background knowledge to access content in reading.
* Have students complete graphic organizers constructed with prompts that guide them to paraphrase what they are reading and cite supporting evidence.
* Construct prompts so that students are able to make the connection between what they are reading and how the content can be used in developing their writing response(s).

SWDs:

* Utilize various ways of students being able to hear text as they read it including software and other technology-based options that are available for text-to-speech purposes.
* Elicit prior knowledge and build background knowledge to access content in reading.
* Have students complete graphic organizers constructed with prompts that guide them to paraphrase what they are reading and cite supporting evidence.
* Construct prompts so that students are able to make the connection between what they are reading and how the content can be used in developing their writing response(s).

# Writing

ELLs:

* Provide writing frames and sentence starters.
* Explicitly teach the academic language associated with the writing genre being taught.
* Note that cultural differences in writing discourse may influence ELLs’ approaches to writing in English. For example, the order of ideas and arguments within an argument essay in English may be significantly different than that which is in the ELLs’ native languages. This can be taken into account when scaffolding writing instruction and providing feedback to student writing.

SWDs:

* Present alternate ways of communicating ideas other than traditional writing which can include dictating, using speech-to-text software, and allowing a student with grapho- motor, fine motor, and/or visual perception challenges to use a computer instead of writing the essay by hand.
* Explicitly teach how to use information from a graphic organizer to create an essay.
* Provide writing frames and sentence starters.
* Explicitly teach the academic language associated with the writing genre being taught.

**Native Language Support for ELLs:** The strategic use of the native language can be incorporated into English instruction as a support structure to clarify, build prior knowledge, extend comprehension, and bridge prior learning and experiences. This can be integrated into a teacher’s instructional practice through the following: technology, human resources (e.g., paraprofessionals, peers, and parents), native language materials, and flexible grouping.

1. **Extensions or variations:**
2. **Scoring:**

Student work can be scored using the Rubric for the Science, Technology and Society Position Paper.