

Viruses

Grade Level: 4-5

Objectives:

1. Students will learn what computer viruses are.
2. Students will learn how computer viruses can be transferred.
3. Students will learn how to protect themselves from computer viruses.

Materials:

Envelope, small strips of paper, basket

Introduction:

Ask the students the following questions:

1. What is a virus?
2. How are viruses transferred?
3. What happens when a computer gets a virus?
4. What are some ways in which we prevent from getting viruses?

Preparation for Activity:

On the day prior to the activity, pass out blank strips of paper and instruct students to write a one-sentence friendly message that uses at least one vocabulary/spelling word. Collect and review these messages for appropriateness. Discard one of the messages and replace it with a strip of paper that has the word “virus” on it. Place the messages in an envelope.

Activity:

1. Have the students sit in a circle on the floor.
2. Pass around the envelope containing the messages. Remind the students that they should keep it a secret if they receive the virus message.
3. After each student has a piece of paper with a message on it, and one person has a piece of paper with the virus on it, the students should pick a person across the

circle to whom they want to give their message.

4. Pick one student to start and have him or her put the message in the basket and pass it around the circle to the student whom he or she wishes to send the message. Each person between the sender and the receiver should place his or her message in the basket along with the original sender’s message.
5. If the person who has the virus message is sitting between the sender and the receiver, when the basket gets to the virus holder he or she should put his or her message in the basket as well.
6. If a basket reaches the receiver without the virus in it, then the receiver reads all of the messages.
7. If the basket reaches the receiver with the virus message in it, the receiver begins reading the messages until he or she gets to the virus message. The virus message stops the rest of the messages from being received.
8. After the receiver has read all he or she can, fold the messages and redistribute. Choose a new sender and receiver.
9. Repeat the activity so that the message has made it both “infected” and without being “infected.”

Closing:

Discuss with the students that viruses are transferred on the computer through messages that are sent from people. Discuss with the students that they can also get computer viruses from downloading programs in which they don’t know where the information is from. Discuss with the

students that just as the virus as it was received affected the receiver in the activity, a virus on the computer affects the receiving computer.

Tell the students ways in which they can protect themselves from getting computer viruses:

1. Do not download programs from the internet without asking your parents first.
2. Do not open emails that have attachments unless you know who the email is from and what the attachment is.
3. Do not accept files through instant messenger unless you know who is sending it and what it is.
4. Do not open files on disk unless you know exactly what is on that disk.

If the time and technology are available, the “Snow White’s Bad Apple” comic from the Disney website listed below is an excellent individual or whole-group supplemental activity.

Supplemental Websites:

- <http://disney.go.com/activities/today/index.html>
- <http://sophos.com/virusinfo/explained/primary.html>
- http://www.cerias.purdue.edu/education/k-12/community_awareness/infosec_newsletters.php

Indiana Academic Standards:

Grade 4:

Language Arts:

4.1.6 Distinguish and interpret words with multiple meanings (*quarters*) by using context clues (the meaning of the text around a word).

4.4.10 Review, evaluate, and revise writing for meaning and clarity.

4.4.11 Proofread one’s own writing, as well as that of others, using an editing checklist or set of rules, with specific examples of corrections of frequent errors.

4.4.12 Revise writing by combining and moving sentences and paragraphs to improve the focus and progression of ideas.

4.6.2 Use simple sentences (Dr. Vincent Stone is my dentist.) and compound sentences (His assistant cleans my teeth, and Dr. Stone checks for cavities.) in writing.

4.6.3 Create interesting sentences by using words that describe, explain, or provide additional details and connections, such as adjectives, adverbs, appositives, participial phrases, prepositional phrases, and conjunctions.

4.6.5 Use parentheses to explain something that is not considered of primary importance to the sentence, commas in direct quotations (He said, “I’d be happy to go.”), apostrophes to show possession (Jim’s shoes, the dog’s food), and apostrophes in contractions (can’t, didn’t, won’t).

4.6.8 Spell correctly roots (bases of words, such as *unnecessary*, *cowardly*), inflections (words like *care/careful/caring*) or words with more than one acceptable spelling (like *advisor/adviser*), suffixes and prefixes (*-ly*, *-ness*, *mis-*, *un-*), and syllables (word parts each containing a vowel sound, such as *sur-prise* or *e-col-og*).

Grade 5:

Language Arts:

5.6.7 Spell roots or bases of words, prefixes (*understood/misunderstood*, *excused/unexcused*), suffixes (*final/finally*, *mean/meanness*), contractions (*will not/won’t*, *it is/it’s*, *they would/they’d*),

and syllable constructions (*in-for-ma-tion*, *mole-cule*) correctly.

5.6.6 Use correct capitalization.

5.6.3 Identify and correctly use appropriate tense (present, past, present participle, past participle) for verbs that are often misused (lie/lay, sit/set, rise/raise).

5.6.4 Identify and correctly use modifiers (words or phrases that describe, limit, or qualify another word) and pronouns (he/his, she/her, they/their, it/its).

5.6.5 Use a colon to separate hours and minutes (12:20 a.m., 3:40 p.m.) and to introduce a list (Do the project in this order: cut, paste, fold.); use quotation marks around the exact words of a speaker and titles of articles, poems, songs, short stories, and chapters in books; use semi-colons and commas for transitions (Time is short; however; we will still get the job done.)

5.6.1 Identify and correctly use prepositional phrases (for school or In the beginning), appositives (We played the Cougars, the team from Newport), main clauses (words that express a complete thought), and subordinate clauses (clauses attached to the main clause in the sentence).