Hector's World® - Lesson Plan
Interactive Episode – Computer Security: "Oops"
Ages 7-8

OBJECTVES:

1. Children understand that passwords can help protect information we care about on a computer.

2. Children undertand that some files can harm computers but parents / cargivers can help keep them safe

SUGGESTED LESSON PROGRESSION:

<table>
<tr><td>**Teacher's Hints**</td><td>*The episode contains two "Pause Points" that provide an opportunity for classroom discussion. Although this lesson may stand alone, it is preferable that learners have been introduced to the Hector's World characters. There are three activities to re-enforce the lesson concepts. They need to be printed and copied/prepared before the lesson. They are included at end of this plan along with additional extension activities and learning links.*</td></tr>
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Connecting learners

Introduce the animation and allow the learners to share some of their previous knowledge about Hector and his friends.

Explain for those not familiar with the resource that Hector and his friends use lots of technology in their world under the sea, Silicon Deep. They like to learn about helping each other and being good digital citizens. This episode is about a computer virus.

Ask: "Who has heard the words "computer virus" ; "What is a computer virus?" Acquaint learners with the term through a short discussion. Some students at this age may know the terms 'virus' 'anti-virus', 'pop-up window' or 'spyware'. They may have a basic understanding that a computer virus can harm or damage computer files.

Put new or unfamiliar vocabulary arising from discussion on the board.

Explain: "In this episode, Sprat's computer gets a virus just as his friends are about to watch something very special on Sprat's computer. He will need some help to get the problem sorted out."

Activating learners

*Show students the picture of the 'pop- up window' from the episode (**Image 1 attached**). Ask students to look for this "pop-up window" scene and watch closely what happens to the computer.*

A pause point symbol ⏸ will appear in the episode in the lower right corner 3 seconds before the point to stop the video.

Start the animation.

Pause Point 1: At the first pause point, stop the animation and allow the learners time to consider Sprat's problem and share ideas about possible solutions.

Think-Pair-Share:
Have students:
1. **Think** silently about the following questions,
2. Work in **Pairs** to talk about their ideas.
3. Call on some pairs to **share** their ideas with the class.
Ask

- What do you think has happened to Sprat's computer?
- Sprat has invited all his friends to watch the special concert on his computer. How would Sprat be feeling about the computer breaking down right now? Use **Image 2: Sprat "How does Sprat Feel?"** attached

  Create a list of words on the board (or large paper)that children use to describe Sprat's feelings. This will be used later in the student activities for this lesson. The list is likely to include: unhappy, scared, worried, afraid, sorry, sad, upset, tricked, bad.

- What could Sprat do?

Additional questions for class discussion:

- What could happen if Sprat tries to fix the computer himself?
- What could Sprat say to his friends who are here to watch the concert?
- How did Hector and Tama feel when Sprat rushed out?
- Who can Sprat turn to for help?

(These questions explore Sprat's need to find a resolution quickly and how this might make him feel.)

Pause Point 2: At the second pause point, stop the animation and allow the learners time to digest the question and share ideas.

Think-Pair-Share:
- What could Ranjeet say to make Sprat feel better?
  Using the list created at Pause Point 1 Ask students what Ranjeet could say if Sprat is feeling: unhappy, scared, worried, afraid, sorry, sad, upset, tricked, bad

Conclusion of the animation: Immediately following the viewing,
Think-Pair-Share:
- How does Sprat feel now?
- What did Sprat learn from his mistake?

Lead a brief discussion to highlight the key points in the episode:

- Sprat's Dad used his strong password to log onto the computer.
- Sprat clicked on a pop – up window.
- A virus caused Sprat's computer to stop working.
- Sprat sought help and did not try to fix the computer himself.
- Sprat's friends help him to feel better.

Demonstration of learning

Students **Complete** the Student Activity 1 "What happened next…..". Students work in small groups to place story strips of the activity sheet in the correct order. Each story strip highlights a key point in the story. This activity helps students recall the important messages. Pre-preparation of student activity sheets is required.

Alternative: Students work in a group of 8, each holding one of the story strips. They line themselves up in the correct order of the story. The teacher may ask each group member to read out or act out their part of the story.

Optional extension activity

Students **Complete** Student Activity Sheet 2 "Key Ideas". Students can work in pairs to write down the key messages in the story in their own words. Vocabulary lists on the board created during discussion and pictures on the activity sheet will assist students in recalling and writing down key messages. This can also be assigned as a homework activity. Student can view the episodes from home.

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Extension Activities for All Age Groups

Here are some suggested activities that can be used to further extend children's understanding of computer security and passwords. We have included all age groups here to suggest a range of activities, which can then be modified to suit your own class.

Some of these activities use other Hector's World resources that are available on Information Island or Silicon Deep at www.hectorsworld.com .

'Make a strong password' activity in Silicon Deep Workshop

http://www.hectorsworld.com/island/main/workshop_interior_01/index.html

This activity helps children understand, create and remember a strong computer password. The activity can stand alone or be integrated into this lesson plan.

Introduce the activity by determining students current knowledge about passwords and their purpose.
- Who knows what a password is?
- Who uses passwords?
- Why do they use passwords?
- Why do people keep their passwords secret?
- What happens when somone guesses a password?
- What is a weak password/ what is a strong password?

Often young children will consider using the name of a favourite pet, a birthday or a nickname as a password. It is important to help children understand this information is often known by friends. They may also consider an easy to remember number sequence (12345) or even the word 'password'. It is important to help children understand the difference between a weak password and a strong password. Some examples could be displayed on the board.

Explain that today students will make up a strong password. A strong password is made of letters, numbers and symbols combined in a way that no one can guess.

Explain that writing the password down means that someone may see it and it will no longer be a secret password. Drawing a picture can be a way to help remember a password and still keep it secret.

Distribute the activity sheet to students. It is available in the Silicon Deep workshop. The activity sheet encourages them to choose words, numbers or symbols from each column and combine them to make a strong passsword. Students can circle their choices but should try to keep them secret. Students then draw a picture that will help them remember their password and discard the top portion.

Junior classes
Students may know about: secret Santa, secret garden, secret code, keeping a secret about a surprise. They may know of storybooks or movies where characters keep a secret. These examples can be integrated into the discussion.

Discussion points could include: Is it hard to keep a secret? Why do some people have secrets? How would you feel if somone finds out your secret password?

NOTE: For young children you may want to address the issue of 'good secrets vs bad secrets'. It is important that children understand there are some secrets they must tell a trusted adult. A "bad secret" may make them feel uncomfortable or

frightened, and it is important to turn to an adult for help. A good secret may make them feel good or be a way to surpise someone and make them happy.

Senior classes
Students may have computer passwords at school or home. The class may share a log-on to class materials or website. Their examples can be integrated into the discussion.

Discussion point could include: Who uses passwords? Why do some websites use passwords? What could happen if someone knows your computer password? How does a password "protect" computer files? Why do we want to protect some computer files?

<u>Invite an expert</u>
Invite the school computer technician or a computer technician from the local community to speak to the students about the importance of computer security and what they do to keep the school computers safe. Students could prepare questions in advance.

<u>Drama Activity</u>: Students in groups of 6 or 7 can act out a "mini play" that retells the story. A drama activity will give children scope to explore alternative solutions, similar events or other computer security issues. Children can use the character cards or character hats available on the website to portray each character.

<u>Music video and song</u> (available on Information Island www.hectorsworld.com)
The music video (*"Keep Yourself Switched On")* could be played to introduce the class to the music and lyrics. The song encourages young people to keep themselves up-to-date and build their skills. It includes ideas about virus symptoms and virus prevention. Song lyrics can be displayed using a dataprojector or printed for students to read. In groups, students can create movements and dance steps to the song.

Cascade the song to another class. The class could share the song in an assembly or teach it to another class. This could cascade i.e. the first class to learn the song teaches to the next, they each teach to a class and so on until the whole school knows the song and can sing it together.

Hector's World Learning Links

Cybersafety
   Security, Malware, Anti-virus

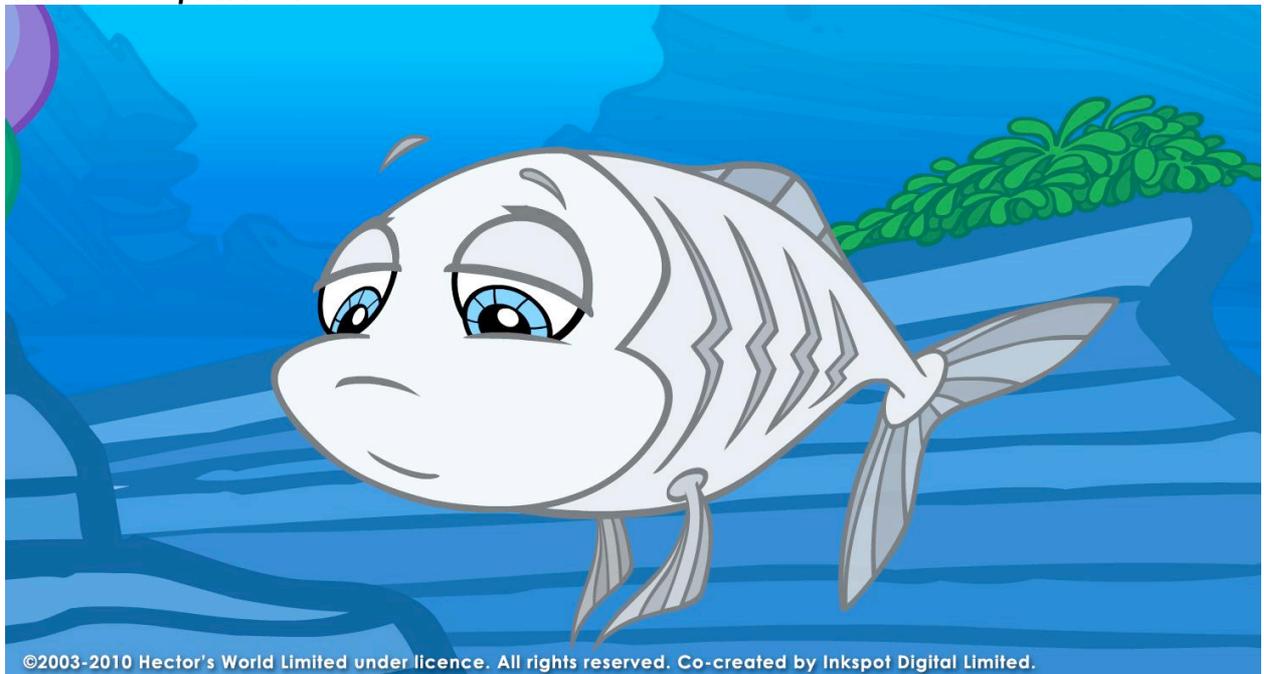**Digital Literacy**
   Information security

Image1: Pop-Up Window *for use before viewing the episode.*

This is Sprat the fish. He is using his computer when a pop-up window appears on the screen. Look for this scene in the episode and watch what happens next.

Image2: Sprat *for use after Pause Point 1*

How does Sprat Feel?

Hector's World Episode - Computer Security:"Oops"
Student Activity 1 "What Happened Next……?"

Note: Children need to view the animated episode first to complete this activity. Below are the major points in Hectors World Episode: Computer Security-"Oops". Students can work together in small groups of two or three to place the story strips in the correct order. The first one is numbered. Alternately a group of 8 students can each be given one story strip. They must then arrange themselves in the correct order. The teacher may then ask each student to read out or act out their part of the story.

Instructions:. Print and make several copies of this list. Cut along the lines to create individual story strips and mix their order. Give a complete set of strips to each group and ask them to find number one. Ask the students 'What happened next?. 'Groups can then work at their own pace to retell the story in the correct order.

1. Sprat's invites his friends to his house to hear music.

Sprat's Dad uses a strong password to log onto the computer.

Sprat clicks on a pop – up window.

Sprat's computer gets a virus.

Sprat's computer stops working.

Sprat gets help from Ranjeet the crab.

Sprat's friends help him to feel better.

The music starts and Ranjeet, Sprat and Tama dance.

Hectors World Episode: Computer Security-"Oops"
Student Activity Sheet 2 "Key Ideas"

Sprat invited his friends to see a special online concert on his computer. The computer stopped working just before the concert was going to start.

1 Sprat's computer stopped working because….

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2. When the computer stopped working, Sprat felt….

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3. Ranjeet helped Sprat feel better by saying ….

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4. A computer needs 'anti-virus' software so the computer will…….

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5. If something goes wrong with my computer I will   …….

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