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WELCOME TO THE INVASION OF THE SHADOW PLAGUE

Welcome! The *Invasion of the Shadow Plague* online course provides an opportunity for students to practice authentic and meaningful 21st century skills in the context of a fun and mysterious story. As they progress through the nine missions, uncovering more details about the dreaded Shadow Plague that has attacked our world, students learn the skills and the concepts behind designing and creating good video games.

We believe that students ought to have the chance to be creative digital designers and so the *Invasion of the Shadow Plague* was developed as a fun and engaging way to help students learn how to design games. The *Invasion of the Shadow Plague* is structured using principles from good game design. Students earn badges at the successful completion of each mission, and throughout each mission there is a collection of helpful online and video tutorials. Students can work at their own pace, in their own way, to make the games they want to make.

Not only will your students get the chance to play and make a variety of video games, you’ll see them developing their literacy skills; striving to work collaboratively; problem-solving and thinking critically and creatively; analysing, refining and editing their work; and self- and peer-assessing their games towards an authentic final product.

On behalf of all of us at the Macquarie ICT Innovations Centre, we’re very glad you could join us on this journey into game design and we look forward to the great joy and success your students will experience as they write, design, prototype, test, iterate and publish their own video games.
GETTING STARTED

Setting up your account on Invasion of the Shadow Plague

Once you have been accepted into the *Invasion of the Shadow Plague*, you will receive an email inviting you to create an account. Click on the auto-generated link to be taken to the ‘Sign Up’ page.

![Sign Up Page](image)

*Invasion of the Shadow Plague ‘Sign Up’ Page*

**Important: Your Username CANNOT have any spaces in it!**

We strongly recommend that you include your DEC or school email when signing up a new account. If you ever forget your password, you can easily ask for a replacement temporary password to be sent to your provided email address.
**Downloading Kodu Game Lab**

The game design software that we recommend and support is Microsoft’s *Kodu Game Lab*. This is a free download for Windows based computers, so students can download it and use it at home from Microsoft’s Download Centre: [http://www.microsoft.com/en-au/download/details.aspx?id=10056](http://www.microsoft.com/en-au/download/details.aspx?id=10056).

*Kodu Game Lab* is also available through the eT4L and DER image. If your school computers are remotely managed, you can request to have the software installed. Ask your school’s Computer Coordinator, or alternatively, the DEC’s ICT Help Desk for more information on how to remotely install software via the T4L image.

If your school is not remotely managed, or you would prefer to install *Kodu Game Lab* manually across the required computers, you will need your school’s network admin password in order to install the software and then you can run the installer from Microsoft’s Download Centre: [http://www.microsoft.com/en-au/download/details.aspx?id=10056](http://www.microsoft.com/en-au/download/details.aspx?id=10056).

As you install the *Kodu Game Lab* software, you might be asked to install some additional software to ensure *Kodu Game Lab* will work correctly on your system. You will only be asked to install these important updates if they are not already present on your machine. The files are:

- Microsoft .NET 3.5 Framework
- Microsoft XNA 3.1 Redistributable

These are critical updates you will need to install before you can run *Kodu Game Lab*. The *Kodu Game Lab* installer can take you through this process to automatically download the required files.
Configuring *Kodu Game Lab* for best performance

*Kodu Game Lab* can be very graphics-intensive for some lower-end computers. To ensure that your software is running as best as it, we recommend the following settings on each computer.

Usually, once the settings have been adjusted they will remain in this state. However, students might adjust the settings after initial setup for a variety of reasons. You may want to walk through these instructions with your students as a first-step, something they do every time before they load up the *Kodu Game Lab* software.

When you install *Kodu Game Lab*, you will see two icons. The green icon will open the software, and the grey *Configure Kodu Game Lab* will open a file settings screen (shown below).

**Important:** *Kodu Game Lab* must be closed before you can open the Configuration file!
We recommend the following settings shown here to ensure that Kodu Game Lab will run well on any machine:

- Graphics Quality set to ‘Standard’
- Full screen unchecked
- Resolution at 800 X 600 pixels
- Smoothing (FSAA) unchecked

In this settings menu, you can also choose where you want the .kodu files to be saved. Usually, it is best to leave this with the default setting. Student files will then be saved into the student’s personal account, and should be accessible on any computer that student logs in to.

MANAGING STUDENT ACCOUNTS IN INVASION OF THE SHADOW PLAGUE

Creating a classroom

The Invasion of the Shadow Plague groups students by their classes. Before you can get students to start attempting missions, you’ll need to set up a classroom and add the students to the classroom. Click the ‘Classes’ tab and you will be given the opportunity to create a new class or join an existing one. To create a new class; fill in the class name, choose the school and choose the maximum number of students – default is 35 students. Then click ‘Create Class’.

Now you can click on your class link to start adding students to the classroom.
Adding students to a classroom

An example of an empty class is shown below.

You can either add students in manually by typing in their username and student email, or as a group by a CSV file, see below.

Each student that is added to a class will receive an invitation email just like you did, and they will need to access this email and follow the link to set up their accounts.

**Remember: Account usernames CANNOT have spaces in them**

If you’re not sure what to use for student usernames; we recommend first name, initial of surname, and class name separated by an underscore. For example:

```
AnthonyF_5F
```

Again, this is best done as a whole class activity. Students should write down their username and password and keep it in a safe place.
Adding groups of students by a CSV file

CSV stands for comma-separated values. A CSV file is basically a spreadsheet that uses commas to separate blocks of text rather than visual boxes. This makes it easier for the website to read and access large lists of names. You can upload a CSV file for a group of students to send out bulk invites all in one go.

To create a CSV file to bulk upload students, you will need to open up Microsoft Excel. You will need two columns, **without headings**: one with the student’s username for the website and the other with the student’s email address. See below for an example.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>bob01</td>
</tr>
<tr>
<td>2</td>
<td>jenny01</td>
</tr>
<tr>
<td>3</td>
<td>mohamed99</td>
</tr>
</tbody>
</table>

**bob.smith@test.edu.au**

**jenny.smith@test.edu.au**

**mohamed.smith@test.edu.au**

Remember: Account usernames CANNOT have spaces in them

If you’re not sure what to use for student usernames; we recommend first name, initial of surname, and class name separated by an underscore. For example:

AnthonyF_5F

To save the file, click ‘Save As’. In the save menu, below the file name, choose to save the file as a CSV (Comma delimited) (*.csv), as shown below.

Now your CSV file can be uploaded. The website will set up the account usernames for each student, and will email each student with a link to register and set up a password for their account. Students will need to access this email and follow the link to set up their accounts.

*The link ‘Need help with CSV files’ has great information on how to format your list of student information so it can be processed.*
Resetting student and teacher passwords

The easiest way to reset a forgotten password is to follow the ‘lost password’ link when they try to login.

Follow this link, and then type in the student’s email address. An email will be sent to that address with a link to reset the password.

NAVIGATING THE INVASION OF THE SHADOW PLAGUE WEBSITE

Once your class has signed in to the website, they can navigate around the different parts of the site using the navigation menu.

Story

It’s important for beginner players to read through the story to get an understanding of the Shadow Plague. However, this is just the introduction. The story leaves parts deliberately vague so that students can use it as a scaffold to construct their own story, and work out how they will save the world from the Shadow Plague
Missions

Students will spend most of their time in the Missions tab. Here they get access to all the missions they can attempt. As students complete the challenge for each mission, the teacher will view the student submissions and award a badge for successful completion of each mission.

Badges start greyed out, and as students earn them they are unlocked and are shown in full colour to let the student see their progression.

Each mission focuses on a different aspect of what it takes to be a great game designer, but all missions will require students to submit at least some work sample; whether this is a prototype .kodu file, a typed document or some scanned artwork.

Each mission has been designed to fit within an hour block to ensure that students can complete at least one mission per allotted time in the school’s computer lab. Some missions will have links to online and/or video tutorials that introduce a specific technique.

Spawn

This is the first mission. Before students can become Game Designers, they must prove themselves as Game Players. To earn the Spawn badge, students must:

1. Play a sample video game and deconstruct this video game using the provided deconstruction worksheet (see Teacher Resources, pg. 18).
2. Choose a different video game, perhaps one they have played at home, and write a video game review using the provided Game Designer Scoreboard rubric (see Teacher Resources, pg. 17) as a starting point.

Students will need to submit their one page video game review as a typed document. Details for the review are listed under ‘Mission Report’.

Apprentice

This mission is the students’ first introduction to the Kodu Game Lab software. This mission also introduces students to the online and video tutorials that will guide them through the software.

Students can click on the images to access a page describing each tool and some videos demonstrating how to use each tool.
To earn the Apprentice badge, students must:

- Learn how to start painting and building 3D worlds in Kodu Game Lab
- Learn how to place character objects in the world, and begin to program them to make simple games.

Students will submit their completed world as an exported .kodu file. There is a video tutorial for how to export games as .kodu files on this mission page.

**Creator**

The Creator mission expands upon the introductory story and starts to flesh out some more details about the Shadow Plague. This activity is an off-computer task where students create the rest of the story and think about how they might defeat the Shadow Plague.

To earn the Creator badge, students must:

- Write a two-page narrative using the information they’ve learnt so far about the Shadow Plague. This story will describe their first encounter with the Shadow Plague, and will be used as the basis for their first game level.
- Complete a Core Loop worksheet (see Teacher Resources, pg. 18) to help them transform their linear narrative into an event or level for their game.

Students will submit their story and their completed Core Loop, along with any other pictures or drafts.

**Defender**

This mission introduces some more intermediate building and programming techniques.

To earn the Defender badge, students must build, program and upload a prototype game that uses at least one technique from each of the three ‘villages’. Click on each image to see the online tutorial associated with it.

**Designer**

This mission requires students to take their completed story and Core Loop from the previous mission, and start working to transform their ideas into the first level of their game. The Designer mission introduces students to the concept of video game genres and challenges them to plan and draw a world map of their level, labelling the key parts, before they start to build and program the level in Kodu Game Lab.

Genres are the different types of video games. Video game genres are grouped on how the player is expected to play the game (for example, puzzle game, racing game, platformer, real-time strategy), rather than on the theme of the story like movies and books are (for example, action, adventure, comedy, romance).

Students can click on the link to open up a Popplet that shows some popular video games and explains which genres each would fit into.
To earn the Designer badge, students must:

- Draw and label the world map for their first level.
- Build and program a draft of their first level in *Kodu Game Lab*.

These documents can be collected in a .zip file and uploaded.

**Spy**

The Spy mission challenges students to think more deeply about games and about strategies for making good games great. Good game design relies a lot on what’s called ‘intuitive design’. This simply means that the game has been designed so that players will intuitively know what to do, where to go, and what they have to do to win the level.

Some poor games are let down because they aren’t intuitive enough, and as a result they leave players confused or frustrated.

The Spy mission offers three different ways that students can demonstrate their understanding of how to make games more intuitive, exciting and challenging: Art Spy explores how colours can be used in a game to inform players and establish certain emotions and atmospheres; Story Spy emphasises great writing in video games; and Code Spy offers the chance to show off expert level programming skills.

As a teacher, you should encourage students to be aware of which of their peers are attempting each strand of the Spy mission. Each strand requires very different skills, but each strand will improve your game. Students can approach their peers asking for help to improve their games across all three strands.

To earn the Spy badge, students must:

- Choose and complete one strand of the Spy Mission
- Use their analytic skills to review and deconstruct another game, using the Game Designer Scoreboard rubric (see Teacher Resources, pg. 17).

These documents can be collected in a .zip file and uploaded.

**Hero**

The Hero mission offers students the chance to work on the second level of their game. This level will have to be slightly harder and more complex than the previous level to keep the player engaged.

To earn the Hero badge, students must:

- Complete a Core Loop explaining their second level.
- Draw and label a World Map of their second level.
- Build and program a draft of their second level in *Kodu Game Lab*.

These documents can be collected in a .zip file and uploaded.
Community
The Community mission encourages students to work with their peers to refine their current drafts for each level of their game.

To earn the Community badge, students must:

- Test a peer’s game and provide constructive feedback using the scaffold and Game Designer Scoreboard rubric (see Teacher Resources, pg. 17) provided.
- Write, film or present a tutorial to the class, sharing with their peers one of their personal successes.

These documents can be collected in a .zip file and uploaded.

Kodu Master
This is the final mission. Students must create the final level (and climactic conclusion) to their game. This mission also explains to students how to link their individual levels together to make one completed game.

To earn the Kodu Master badge, students must:

- Design the final level of their game using a Core Loop sheet.
- Build and program the final level of their game in Kodu Game Lab.
- Have their game play-tested by at least two peers
- Refine and edit their three levels as necessary.
- Create a poster, presentation, SMART Notebook or video to advertise their game.

These documents can be collected in a .zip file and uploaded.
AWARDING BADGES

As the teacher, it’s your responsibility to monitor student submissions and award badges for successfully completing each mission. Awarding a badge to a student means that the badge will appear in colour in the student’s mission tab. You can choose whether you want students to achieve a badge before moving on to the next mission or whether you will let students progress without earning the pre-requisite badges. To see what each student has submitted, click on the Missions tab.

Select the mission you want to view; your students’ submissions can be accessed down the bottom.

Submit for marking

File: Browse... Submit

Posts

- James's Game by James56H (Not Published, Pending)
- Sebastians Game by Sebastian56H (Not Published, Pending)
- Jaspwe 56H Shadow Plague Game by Jasper56H (Not Published, Pending)
- About: Apprentice by Richard56H (Not Published, Pending)
- About: Apprentice by Sam56H (Not Published, Pending)
- Ethan's game by Ehtan56H (Not Published, Pending)

This will also show you whether a student’s submission is pending, or waiting for your permission to award the badge. Simply click on the submission link to download the student’s work samples, and click ‘approve’ to award the badge if work is suitable.
## Deconstruction of a Video Game

### Components

<table>
<thead>
<tr>
<th>Rewards</th>
<th>Player Feedback</th>
<th>What makes the game fun?</th>
</tr>
</thead>
</table>

### Challenge

- Define what the player can and cannot do in the game.
- Core Mechanics: Running, solving clues, searching, climbing...

### World

- Glassy field, red apples and a tree, could, murder
- What parts make up the materials of player E? 8.

### Story

- What does the player have to do to win the game?
- Characters (protagonist/antagonist)

### World

- What does the game take place (setting)? How does the space affect the game?
<table>
<thead>
<tr>
<th>Score</th>
<th>Game designer name</th>
<th>Game description</th>
<th>Limited</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Game designer name</td>
<td>Game description</td>
<td>Limited</td>
</tr>
<tr>
<td>2</td>
<td>Game designer name</td>
<td>Game description</td>
<td>Limited</td>
</tr>
<tr>
<td>3</td>
<td>Game designer name</td>
<td>Game description</td>
<td>Limited</td>
</tr>
</tbody>
</table>
Complete a core loop for every level in your game.

**Core Loop**

**Goal**
- What is the goal of the game?
- What is the main goal?
- What steps do I have to take to achieve this goal?
- What is the reward for completing the goal?

**Challenge**
- Where am I?
- Who am I?
- New world - what does it look like?
- Main character - what does it look like?

**Win**
- Win each challenge.
- Lose each challenge.
- How do I win?
- How do I lose?

Idea + plan + design + prototype = a game that is fun to play.
CONTACT US

If you have any questions or issues, please don’t hesitate to contact us via email: macictsupport@det.nsw.edu.au

Visit our website http://macict.edu.au/

Follow us on Twitter @macict