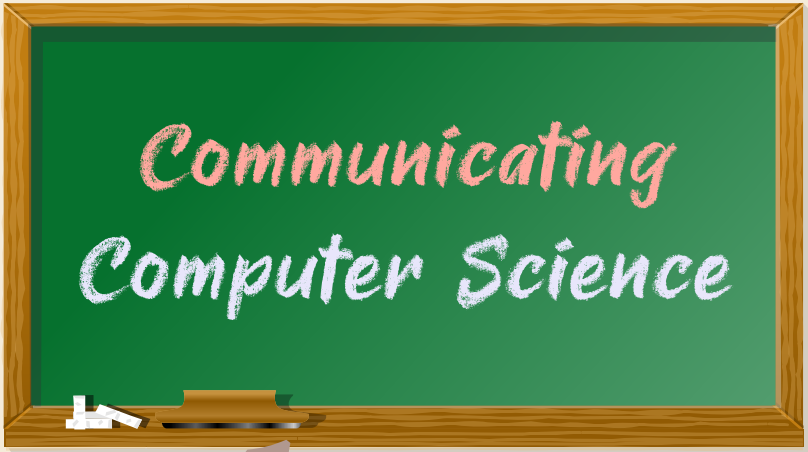

4 Lesson Planning

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Outline

4 Lesson Planning

4.1 What and how to plan

Role of lesson planning

- Teacher Workload Survey (2017)
  - most of their working week spent on planning/preparation
  - 79% (primary) resp. 56% (secondary) said: takes up *too much* time
- Ofsted (Office for Standards in Education) inspection
  - Doesn't require lesson plans in any format (or at all)
  - Doesn't grade schools on their lesson plans or planning methods

⇝ must be intrinsically helpful for teachers

- Lesson plan covers an individual school lesson (45min – 1 hour)
  - format varies
  - content fairly standard (stay tuned)
- Planning is important, but eats (too) much time

⇝ crowdsource, share, reuse, curate!

- Computing at school `https://community.computingatschool.org.uk/resources`
- Teach Computing `https://teachcomputing.org/curriculum`

Lesson plan

Goal/Mindset: Enable *someone else* to run *your* lesson.

- Sharing your slides and material for activities not enough!
- Need to document high-level **idea behind** lesson setup
- Need to document intended order and timing

⇝ *Lesson plan*

What goes into a lesson plan

- Template available on website: `https://www.wild-inter.net/teaching/comp335/lesson-plan`
- Show main aims and links to national curriculum
- State assumed knowledge and skills
- List specific learning outcomes for the lesson
- Time allocated to each aspect of lesson
  - Introduction (using slides to cover key aspects)
  - Activities and Plenary (a summary at the end)
- Cover any resources required and how the classroom should be organized (eg. groups of three, etc.)
- List questions that can prompt learning
- State how you will assess that learning occurred

Lesson Plan Template

https://www.wild-inter.net/teaching/comp335/lesson-plan

Lesson Title

Topic		**Student(s) Presenting**
Age of Pupils 14 to 15 (Year 10)	**Expected Number in Class** 30	**Length of Session** 55 minutes
Links to the National Curriculum in Computing		

Learning Outcomes

1. Able to ...
2. Able to ...

Assumed Prior Knowledge, Skills and Experience

- Students already can ...

Lesson overview

Introduction 5min	lecture	*One sentence summary of the block.*
Activity 1 10min	In pairs	*One sentence summary of the block.*
		...

Preparation

You will need:

1. A Python interpreter and IDE
2. ...

Detailed lesson plan

Introduction 5min	lecture	*Detailed description of the block, including links to teaching material (e.g., slides, worksheets, online resources, etc.) that support this block, and any organizational information required to run the activity. This description should allow a person not otherwise familiar with the lesson to run this block, so include any implicit information or any comments that one would not see on the teaching material.* *This information should also be updated with any pitfalls or new ideas identified in any iterations, so that future iterations can profit from the experience.*
		...

Assessment opportunities

Describe ways of collecting data to check to what extent students have achieved the desired learning outcomes. This need not be test, but can also be based on outcomes of activities or other forms of feedback.

Additional sources

Resources that might help a teacher to improve the subject knowledge on the topic of the lesson.

Lesson overview – Timing your lesson

Use a format that works for your particular topic:

- Some lessons have longer intro + one long activity

- Others have a shorter intro with a return to slides between activities

- Yet others could have several activities with a verbal handover in between

4.2 CA 2 “Lesson Plan”

Assessment

- Timeline
  - Submission due **2 Dec 2022**
  - We will finalize **topic selection** during 2h session on 7 Nov 2022
    Keep thinking about possible topics!
  - Individual meetings with me to discuss progress & questions
  - 5min **pitch** of your lesson to group in 2h session on 5 Dec
- Lesson plan weighs 35% of mark!
  - ⇝ expect substantial work load in the weeks leading to deadline
  - ⇝ block time for working on it!
- Submit the **entire package** needed to run the lesson:
  1. Lesson plan (using template)
     including detailed description of how to run activities
  2. Slides for lecture parts
  3. Any material needed for activities
  4. A blurb / sales pitch of your lesson

Marking Scheme

- **Content** (20%)
  Is the technical subject knowledge correct?
  Has the student put their own ideas into the session?
- **Teaching Materials** (30%)
  Are materials at an appropriate level and free from errors?
  Are the materials using visuals or multi-modal representations effectively?
  Do the materials motivate the subject and make it engaging for a wide audience?
- **Activities** (30%)
  How well do the activities facilitate learning of the topic?
  Are the activities suitable for sparking interest in computer science?
- **Reproducibility** (15%)
  Is the lesson described in sufficient detail to run it based on the plan?
  Is the timing of the session realistic?
- **Context** (5%)
  Has the session been linked to appropriate National Curriculum topics?
  Does it adequately complement lessons on the Teach Computing Curriculum?

Example lessons

- Teach Computing Curriculum has full set of lessons for National Curriculum

⇝ Great pool of good examples with "entire package" for lesson!

- Example: Y9, Unit "Python programming with sequences of data", Lesson 1 (of 6):
  `https://teachcomputing.org/curriculum/key-stage-3/python-programming-with-sequences-of-data/lesson-1-warm-up`
  - You need to make an account to access it; let me know if they don't let you
- Use as guide for
  - amount of material / pace of lessons
  - level of detail in descriptions of activities in lesson plan
  - an indication of what students might already know / already see in school

Some differences to our lesson plans

- Slightly different format
- Some parts in "Unit guide", not individual lesson plan
- more comprehensive links for teachers to learn about topics than we need
- more notes from past experience (pedagogy, common misconceptions) than you will have

4.3 Let's practice

Aliens!

- We'll sketch a lesson plan for an existing activity:

  Part I of the AI summer school
  `https://tiny.cc/ai-course`

- Tasks

  1. Form teams of 2
  2. Open your copy of the template on Google Docs (see Teams)
  3. Discuss with your team partner which parts to start with (which are the most important parts for you?)
  4. Work on filling those parts on the Google Doc