

# Interoperability: the REHASH experience



Presented to  
**SMILE 2006**

Presented by  
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**JISC**

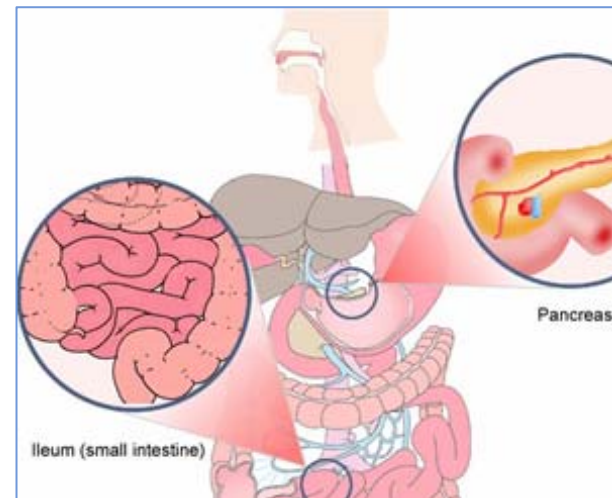
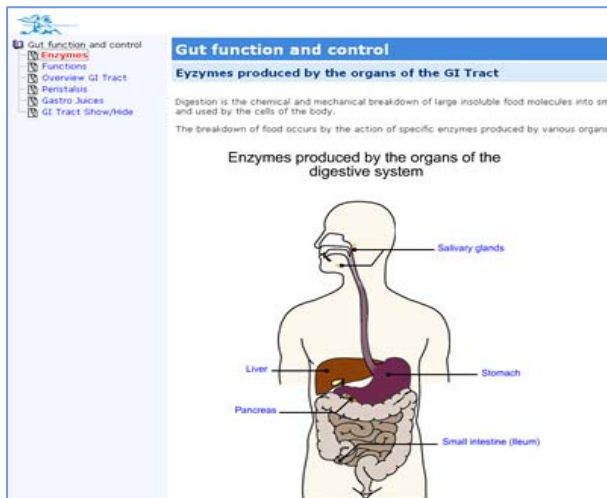
September 2006

## OBJECTIVES

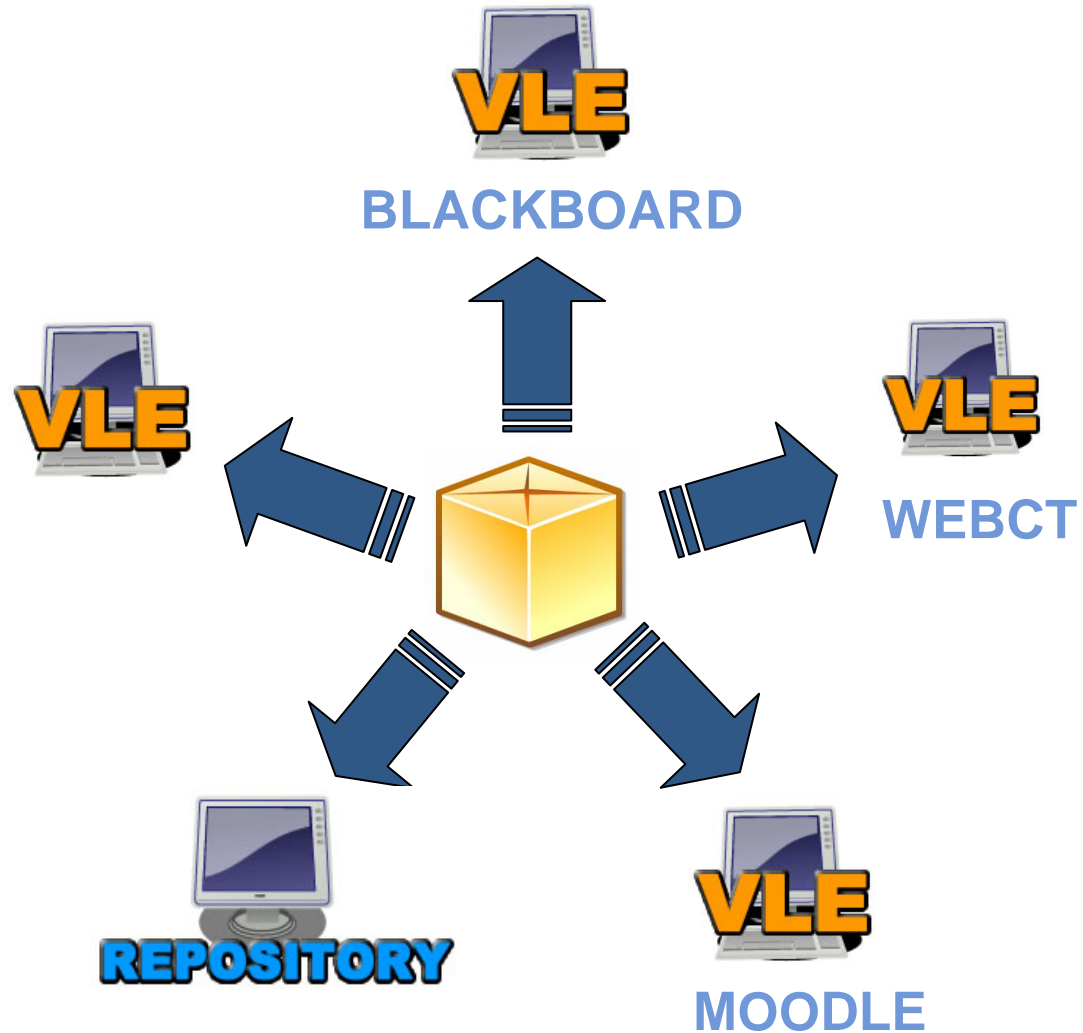
- REHASH resources
- Making resources interoperable
- Upload resources into a VLE/repository

# REHASH RESOURCES

- Cover medical and healthcare subjects
- Developed in web based format
- Media rich e.g. Flash animations, Image, Video
- Aimed at different educational levels, FE & HE



# INTEROPERABILITY



# WHY INTEROPERABILITY?

## SHARING



## REUSE



# SCORM

- Shareable
- Content
- Object
- Reference
- Model

- Interoperable
- Reusability
- Tracking & Book-marking
- Record assessment results

## CONTENT PACKAGE

Collecting learning resources together with metadata content can be moved between programs, facilitating easier delivery, reuse and sharing of materials.



## RELOAD

- Making resources interoperable
- Facilitates reuse
- Add metadata
- Simple sequencing
- SCORM & IMS Compliant





# CONTENT PACKAGE - Architecture

imsmanifest.xml

Header

Metadata

Content

Organisation  
Resources

## CONTENT PACKAGE - Architecture

- **XML Manifest file** - describes the package's contents
- **XML Schema file** - validate the XML manifest
- **Content** - assets e.g. htm, images, video..
- **Metadata** - describes the package

# XML MANIFEST FILE - imsmanifest.xml

```
<manifest xmlns="http://www.imsglobal.org/xsd/imscp_v1p1" (how to interpret this package)
  xmlns:imsmd="http://www.imsglobal.org/xsd/imsmd_v1p2"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" identifier="MANIFEST-65A1BA8F-3A73-
  479E-0F63-163FFDA5B0E1"
  xsi:schemaLocation="http://www.imsglobal.org/xsd/imscp_v1p1 imscp_v1p1.xsd
  http://www.imsglobal.org/xsd/imsmd_v1p2 imsmd_v1p2p2.xsd">
```

```
<metadata />
```

*(metadata)*

```
<organizations default="ORG-9CD8FA62-FF8C-B998-55CA-C1599862AEA6">
  <organization identifier="ORG-9CD8FA62-FF8C-B998-55CA-C1599862AEA6"
    structure="hierarchical">
    <title>Organization</title>
    <item identifier="ITEM-CD55CF07-609F-A592-E0B9-8EC68A32942F" isvisible="true"
      identifierref="RES-5669B8B0-85B5-01D8-0A33-3284AE5A6218">
      <title>sundialjelsim</title>
    </item>
  </organization>
</organizations>
```

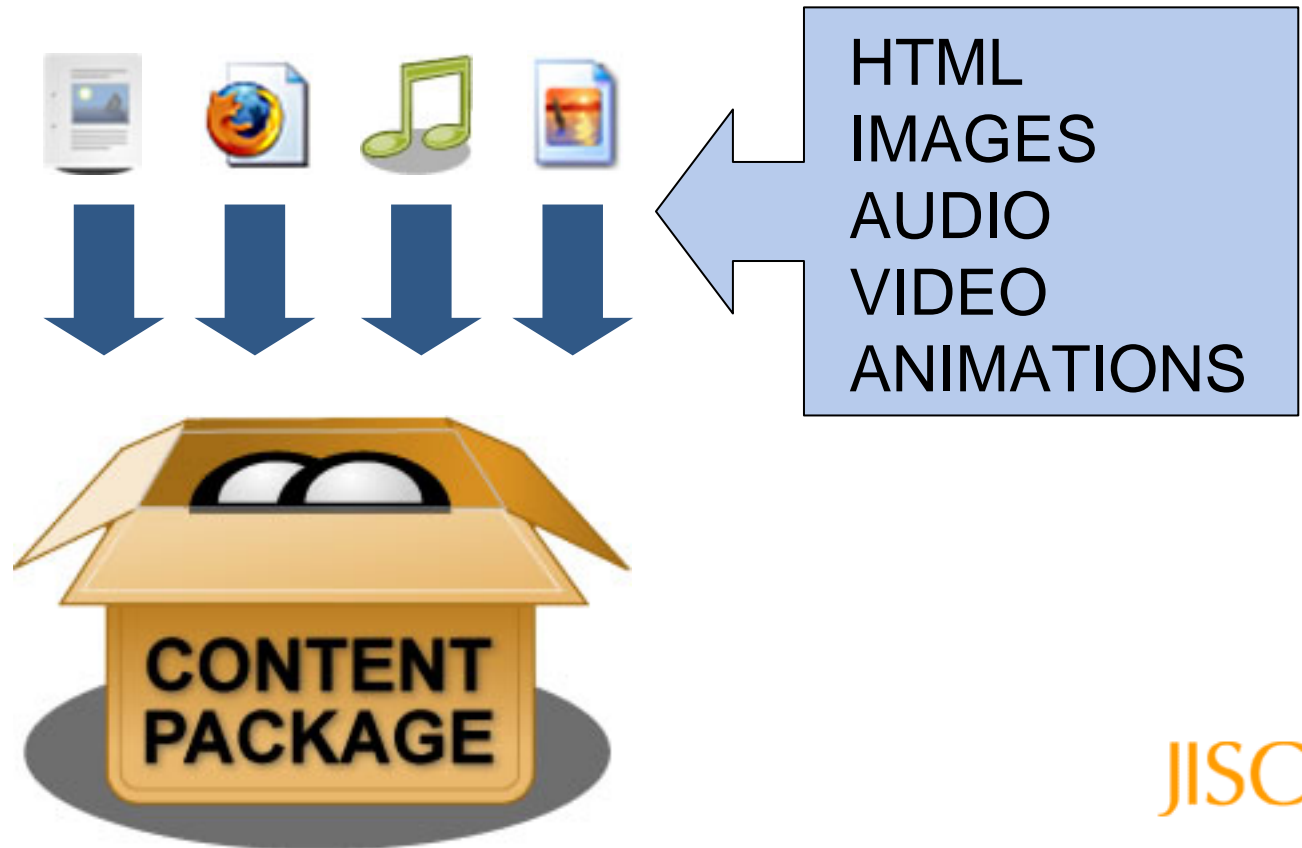
*(how the content is organised)*

```
<resources>
  <resource identifier="RES-5669B8B0-85B5-01D8-0A33-3284AE5A6218" type="webcontent"
    href="sundialjelsim.html">
    <file href="images/jspowered.gif" />
    <file href="images/solarGeom/sun.gif" />
    <file href="jscore.jar" />
    <file href="progress.jar" />
    <file href="SolarGeom.jar" />
    <file href="sundialjelsim.jsm" />
    <file href="sundialjelsim.html" />
  </resource>
</resources>
```

*(what resources are needed)*

```
</manifest>
```

# CONTENT PACKAGE - Adding Content



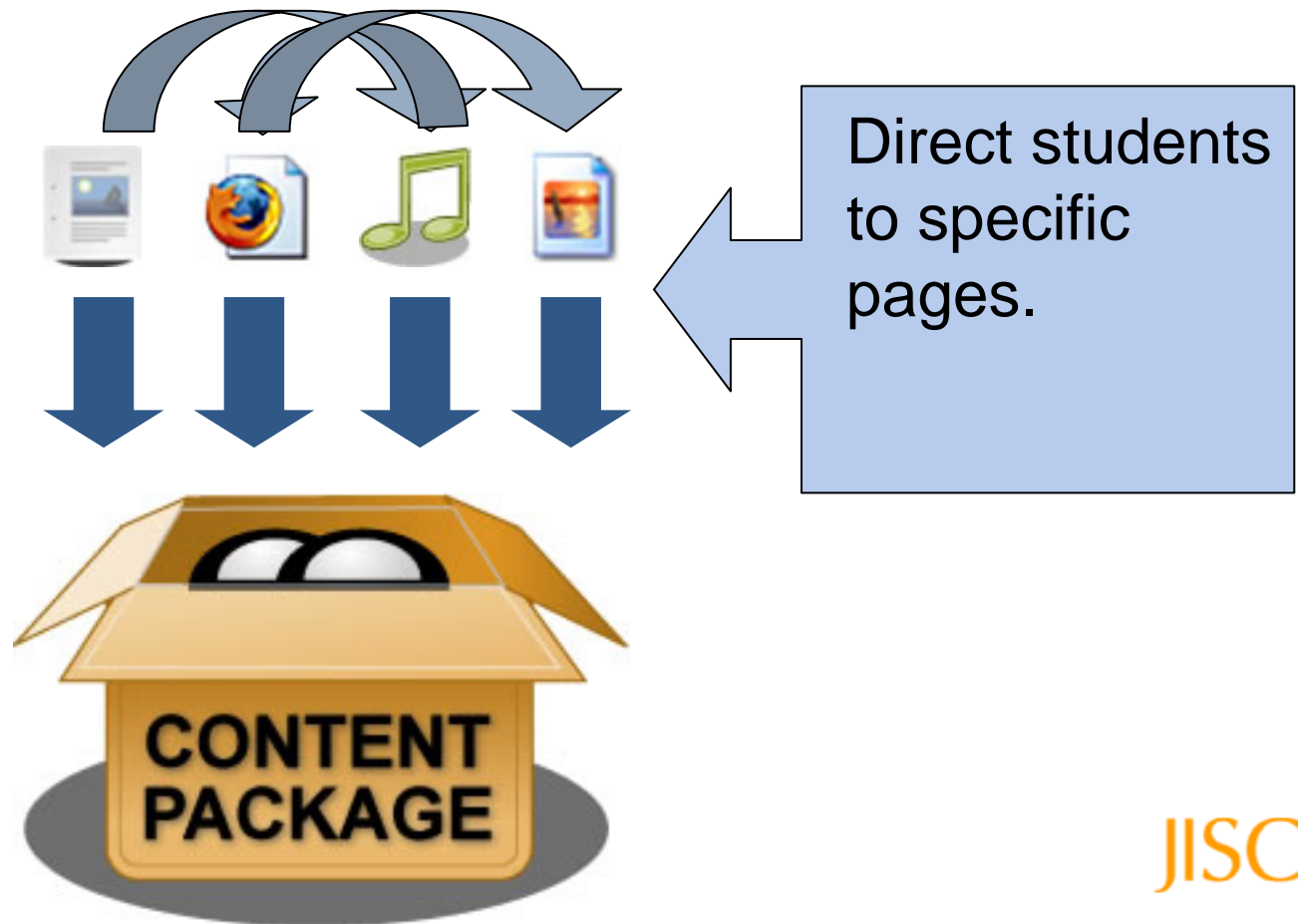
# CONTENT PACKAGE - Extracting content



# CONTENT PACKAGE - Changing content

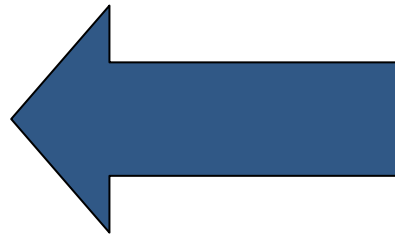


# CONTENT PACKAGE - Simple Sequencing



# METADATA

- Descriptor for content so it can be easily found
- UK LOM CORE (Learning Object Metadata)
- Keywords (taken from the MeSH vocabulary)
- Define educational level



METADATA



# METADATA

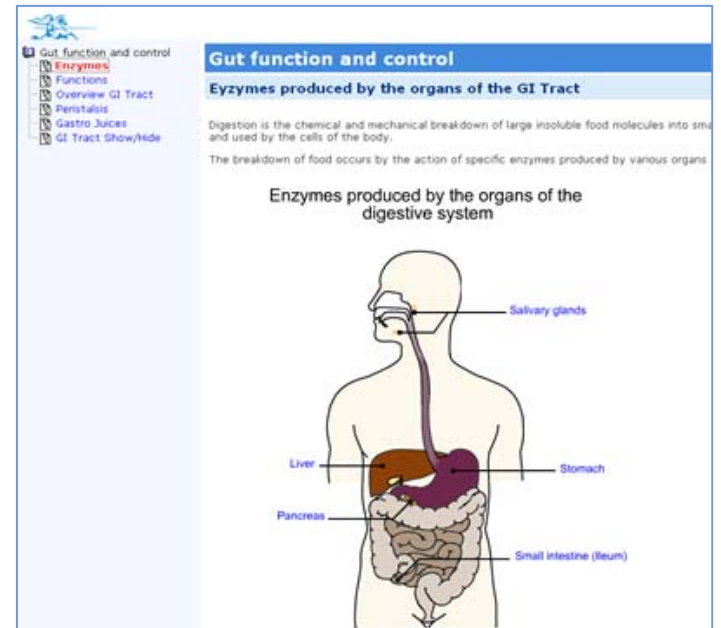
- A list of some of the mandatory metadata for the learning object  
Gut Function and Control:

**TITLE:** Gut Function and Control

**KEYWORDS:** Stomach, Gut, Swallow, Tongue, Peristalsis, Oesophagus

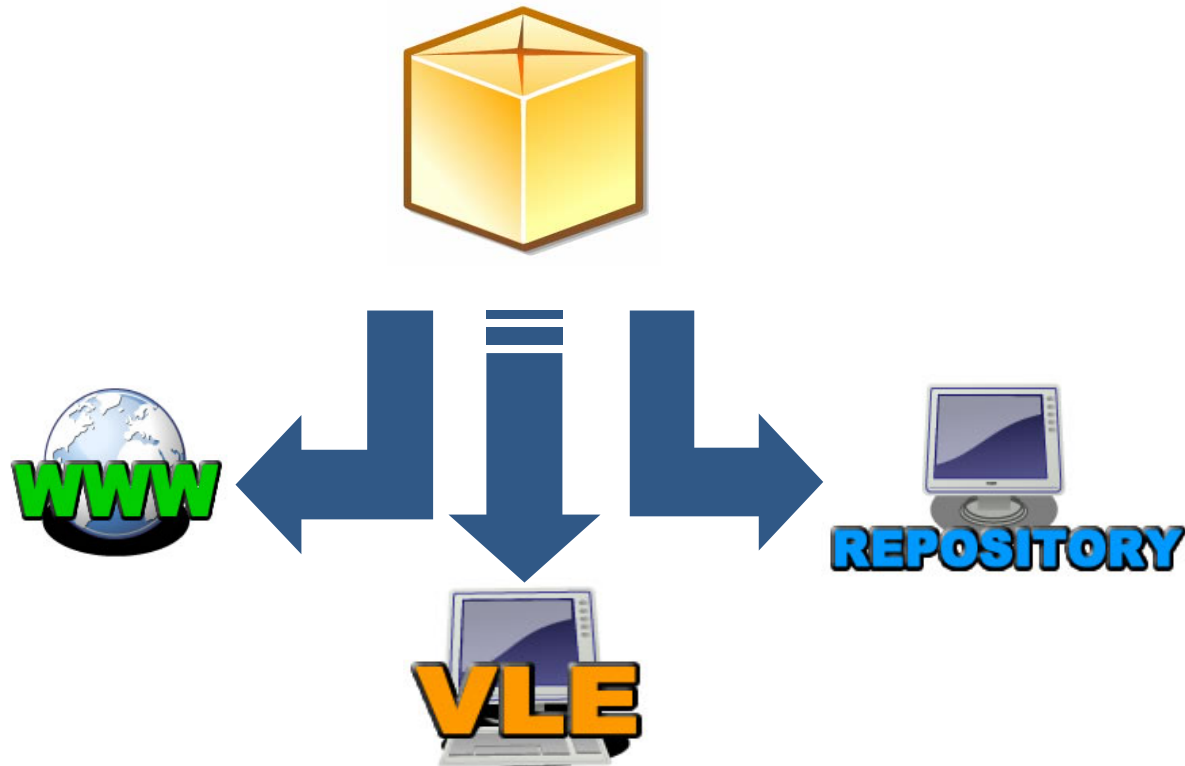
**DESCRIPTION:** This topic explores the structure and function of the gastrointestinal tract (GI) which is accompanied by an animation showing the path of food as it travels through the digestive system...

**UKEC:** Further Education



The screenshot shows a web-based learning object interface. On the left is a navigation menu with the following items: 'Gut function and control', 'Enzymes', 'Functions', 'Overview GI Tract', 'Peristalsis', 'Gastro Juices', and 'GI Tract Show/Hide'. The main content area has a blue header 'Gut function and control' and a sub-header 'Eyzymes produced by the organs of the GI Tract'. Below the sub-header, there is a paragraph of text: 'Digestion is the chemical and mechanical breakdown of large insoluble food molecules into sma and used by the cells of the body. The breakdown of food occurs by the action of specific enzymes produced by various organs'. Below the text is a diagram titled 'Enzymes produced by the organs of the digestive system' showing a human torso with labels for 'Salivary glands', 'Liver', 'Stomach', 'Pancreas', and 'Small intestine (Ileum)'. The diagram illustrates the anatomical locations of these organs and glands.































# CONTENT PACKAGE - Output



# JORUM Repository

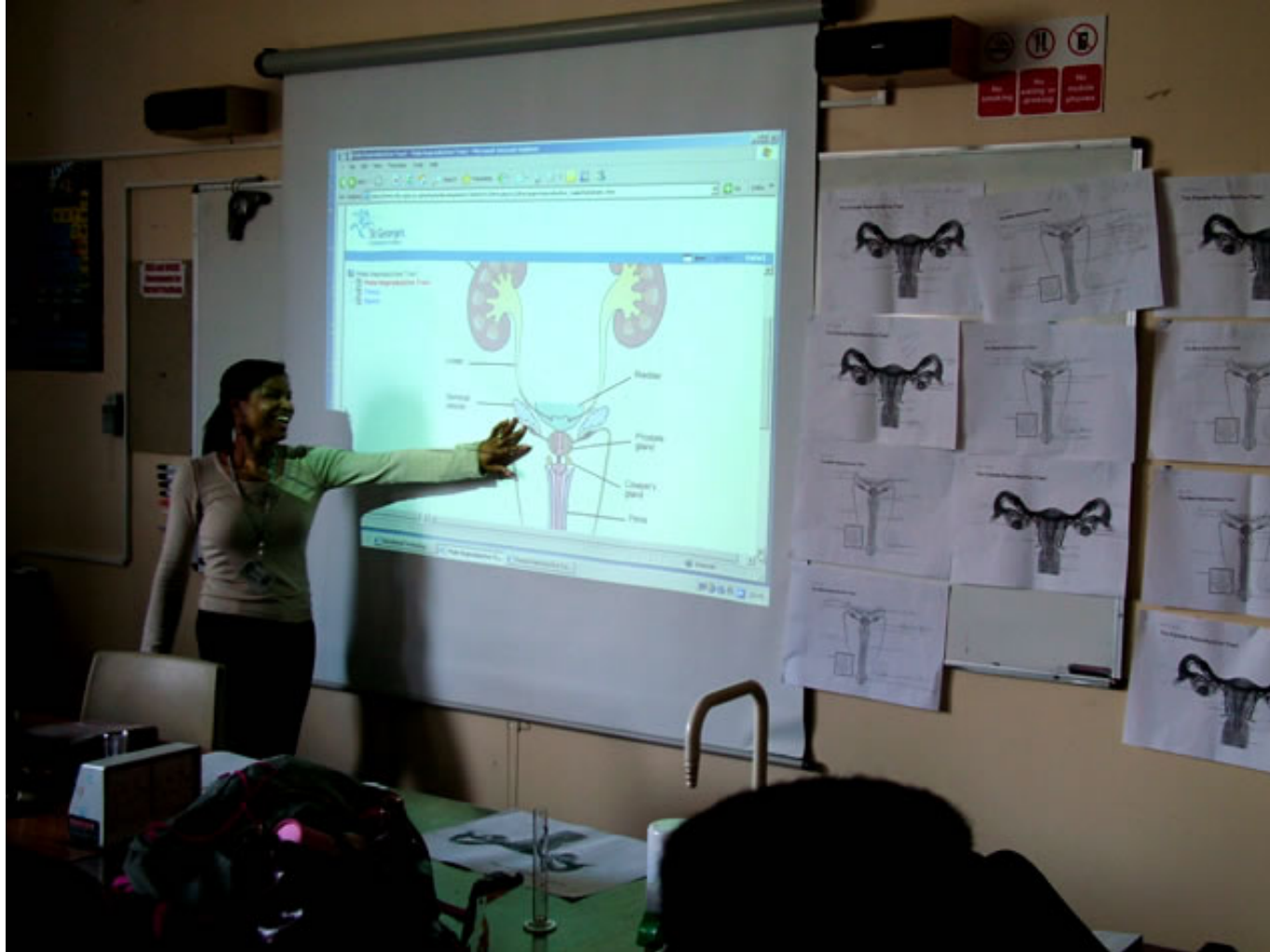
- UK National Repository
- Storage
- Catalogue
- Rights management
- Classification i.e. MeSH, JACs, Learn Direct

## Search Results ( 31 objects found )

-    **Heart Structure (UKEC: Higher Education, HE1)**  
   This topic describes the components of the conducting system of the heart and their individual roles. An in... and shows their relative locations. The topic concludes with a schematic diagram illustrating the direction...  
[comments\(0\)](#)
-    **Factors Affecting Wound Healing (UKEC: Higher Education, HE2)**  
   This topic describes in detail the various factors affecting the wound healing process using rollover animatic... psychological and social factors affecting wound healing are illustrated in detail with a number of examples...  
[comments\(0\)](#)
-    **Renal Function Diuretics (UKEC: Higher Education, HE1, Medicine)**  
   This topic describes the various drugs that affect renal function and introduces diuretics. Diuretics are expl... mechanism of action and the different types, including examples.  
[comments\(0\)](#)
-    **Back Anatomy**  
   This topic starts with an overview of the back, including the abdominal wall. The topic then explores some... back, including the vertebral column, the cervical vertebrae, the thoracic vertebrae, the lumbar vertebrae...  
[comments\(0\)](#)
-    **Ageing Eye (UKEC: Higher Education, HE2, Medicine)**  
   This topic starts with a diagrammatic comparison between the structures of a normal and ageing eye. The... simulated to compare normal vision against blurred and discoloured vision. The same image is again simul...

## SUMMARY

- The REHASH project focuses on minimising unnecessary resource creation, and maximising the exposure of existing content and good practice to the wider community.
- The ultimate goal is the global sharing of free resources, allowing users to ‘cherry pick’ resources for a host of disciplines without concerns over ownership and quality.



[www.etu.sgul.ac.uk/rehash](http://www.etu.sgul.ac.uk/rehash)

