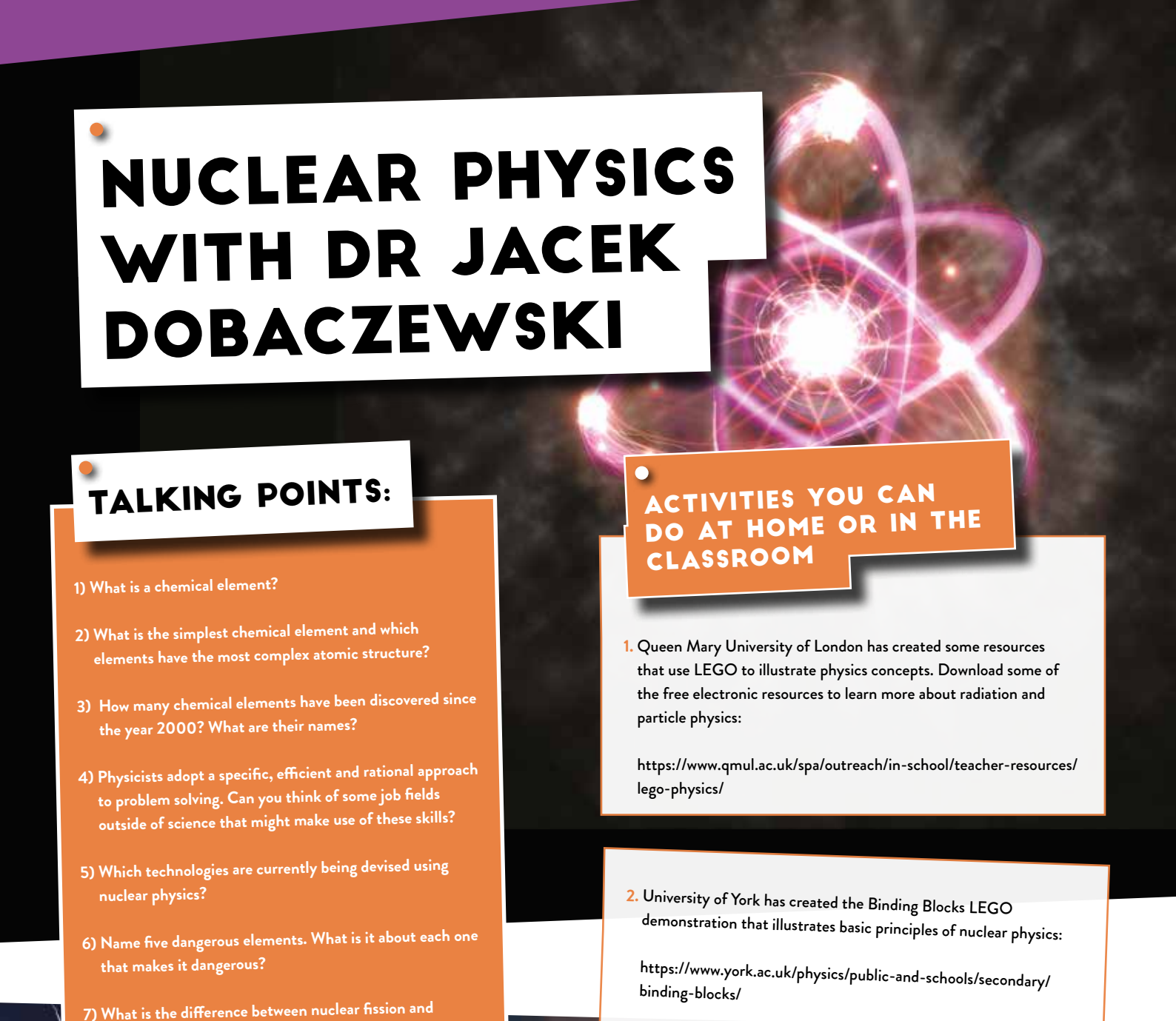
NUCLEAR PHYSICS WITH DR JACEK DOBACZEWSKI



TALKING POINTS:

1) What is a chemical element?

2) What is the simplest chemical element and which elements have the most complex atomic structure?

3) How many chemical elements have been discovered since the year 2000? What are their names?

4) Physicists adopt a specific, efficient and rational approach to problem solving. Can you think of some job fields outside of science that might make use of these skills?

5) Which technologies are currently being devised using nuclear physics?

6) Name five dangerous elements. What is it about each one that makes it dangerous?

7) What is the difference between nuclear fission and nuclear fusion?

ACTIVITIES YOU CAN DO AT HOME OR IN THE CLASSROOM

1. Queen Mary University of London has created some resources that use LEGO to illustrate physics concepts. Download some of the free electronic resources to learn more about radiation and particle physics:

   https://www.qmul.ac.uk/spa/outreach/in-school/teacher-resources/lego-physics/

2. University of York has created the Binding Blocks LEGO demonstration that illustrates basic principles of nuclear physics:

   https://www.york.ac.uk/physics/public-and-schools/secondary/binding-blocks/

   Watch YouTube videos and request a demonstration at your school.

3. Watch the following TEDEd video to gain an understanding of just how small an atom is:

   https://ed.ted.com/lessons/just-how-small-is-an-atom

4. Explore the NUclear Physics Experience: a free database of knowledge created and maintained by nuclear physicists from across Europe:

   http://nupex.eu/