When should careers advice, information and guidance start in schools? For many years, careers support was offered to young people at key decision points: GCSE and A-level options. However, our research at Northumbria University shows that, even before the age of 8, children are starting to make decisions about the sort of jobs they would and would not like to do. And, rather alarmingly, there is a strong gender dimension to their STEM-career choices, with girls tending to say that they would work in biological or health care and boys leaning towards jobs in the physical sciences or technology. Even at this early age, children have imbibed the messages from the world around them about gender-appropriate jobs, and start to limit their possible futures because of these. To tackle this, we’ve been working with over 30 primary schools to explore how teachers can provide careers support to their pupils from early years and upwards.

Firstly, it’s important to make sure that the support is age-appropriate. Howard and Walsh (2009) use a Conceptions of Career Choice and Attainment (CCCA) model to describe how children’s conceptions of jobs, and how to attain them, change with age. Initially, children use fantasy, imagination and role play to put themselves in different careers, often basing their choices on associations with heroes or role models (for example, YouTubers, footballers or teachers). However, there will be little self-reflection about their own preferences and abilities, and they don’t know how someone might get a particular job. As children become older, they start to identify cause and effect: how they might find out about a job and choose one they like, as well as beginning to be aware of their own interests and how they might link those to a job. Finally, as they mature into young people, they come to understand the interaction between personal attributes, job characteristics and system factors (e.g. local job markets), and how the interplay between these can shape job choices. This final approach to careers is unlikely to be attained in primary school, but the children will develop in their thinking from fantasy and role play to becoming aware of their own interests, and have a more realistic view of jobs.

The Citizenship programme of study outlines the breadth of opportunities to which children can be exposed in primary school and that children should be taught ‘…some of the ways people look after them’ (Key Stage 1, ages 5-7) and ‘about the range of jobs carried out by people they know, and to understand how they can develop skills to make their own contribution in the future’. Whilst citizenship isn’t statutory, it does provide a helpful framework for schools when thinking about putting careers in their curriculum. Using this, and the CCCA model, allows teachers to plan careers interventions throughout a child’s time at primary school that build on their current understanding of jobs, and supports them over time to develop a broader understanding of different careers. Teachers can also use them to challenge the stereotypes that children hold about jobs.

Ideas for careers

Starting from Early Years and the Foundation stage, teachers can include a wide range of role play opportunities and link them to different careers. One popular role play is construction, but it can be taken beyond the obvious jobs (builder, bricklayer, plumber) and include broader opportunities (town planner, surveyor, architect, interior designer) by including measuring and drawing equipment in the role play area, to allow children to...
explore more widely. This can also be complemented by a careful choice of storybooks; for example, *Iggy Peck, Architect* by Andrea Beaty would work well.

As children get older, and the demands of the curriculum increase, it can feel harder to carve out time to dedicate to careers. One way to overcome this is to include careers ideas into regular teaching and link careers to the subjects that children are learning about. However, teachers may have a fairly limited knowledge of the range of different jobs, particularly linked to science topics. At NUSTEM, we have developed an online Primary Careers Tool2 to help teachers to broaden the range of careers that they know about and include in their teaching. The tool is a database of over 100 careers, sorted by National Curriculum science topic, with a short description of the career, three attributes that people in that career might need, and a link for counter-stereotypical images of that type of person. For example, if the topic is ‘Earth and Space’, then one of the careers is ‘astronomer’, or ‘satellite communications engineer’, and the attributes are ‘committed’, ‘organised’ and ‘resilient’. It doesn’t take long to put this information into a presentation slide that can be used in the science lesson. The teacher asks the children if they could do that career, and if they share any of the attributes named. This helps children to start to consider how their personal attributes and interests could help them in a future job.

Similarly, we’ve also developed the ‘STEM Person of the Week’3 – a five-week teacher-led project for primary schools. Again, this focuses on a range of different characteristics that children might need to succeed in different careers. The aim is not to persuade more children to take up the specific STEM careers, but to get them thinking about how the things they enjoy and the characteristics they have might help them in future careers, linking with the second stage of the CCCA model.

Careers in the primary classroom are starting to hold more prominence, with external organisations such as the Careers and Enterprise Company4 and Founders for Schools5 looking at how to support primary teachers to embed careers into the primary school. With some careful planning and thinking, primary school teachers can help their pupils to broaden the range of jobs that they know about and think that they could do.

References
2https://nustem.uk/primarycareers/
3https://nustem.uk/stem-person-of-the-week/
4https://www.careersandenterprise.co.uk/schools-colleges/primary-school-support

Dr. Carol Davenport CSciTeach is Senior Lecturer and Director, NUSTEM, Faculty of Engineering and Environment.