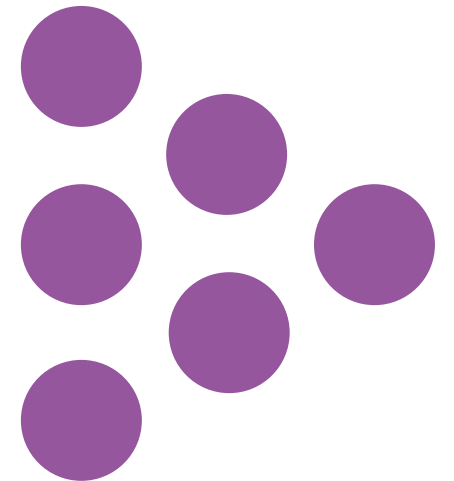

STEM Teacher Recruitment and Retention

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About NFER



We are the leading independent provider of education research and insights, working to create an excellent education for all children and young people

The future of children and young people is critically linked to the quality and level of education they receive. We create research evidence and assessments that inform policy makers and strengthen practice in the classroom to improve their outcomes.

Overview

1. Trends and recent developments in STEM teacher recruitment and retention
2. Policy approaches for improving STEM teacher supply
3. The important role of science technicians in science education

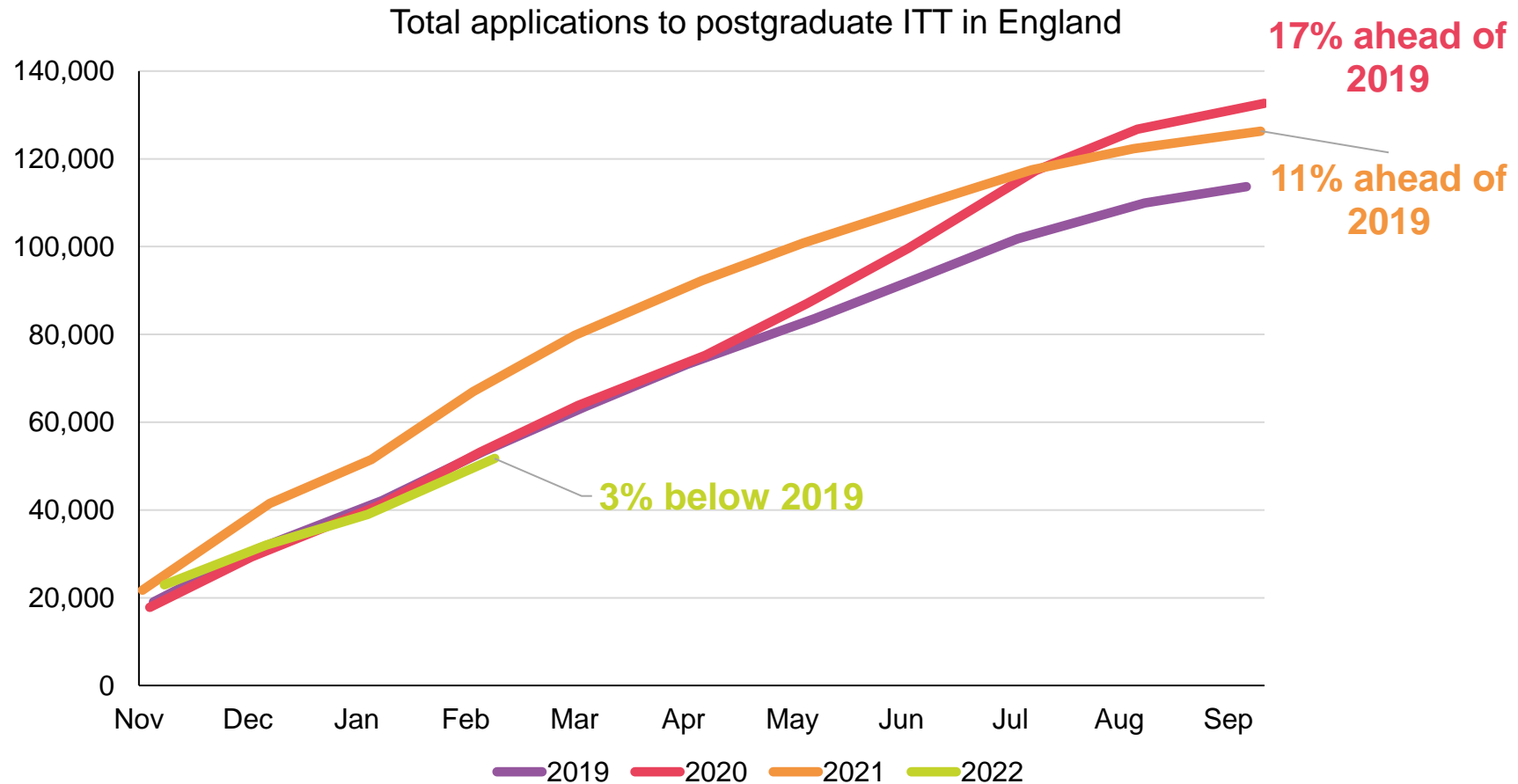
Background

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- **Increasing teacher demand due to growing secondary pupil numbers**
 - **Strong prospects in graduate labour market outside of teaching**
 - High leaving rates of STEM teachers, particularly early in their careers
 - Under-recruitment to teacher training in STEM subjects
 - **Fall in real-terms teacher pay and erosion of competitiveness vs other professions**
 - **Generous training bursaries to encourage recruitment**
 - **Recent early-career retention payments**

Trends in teacher recruitment and retention



The impact of Covid-19 on teacher recruitment was dramatic but short-lived

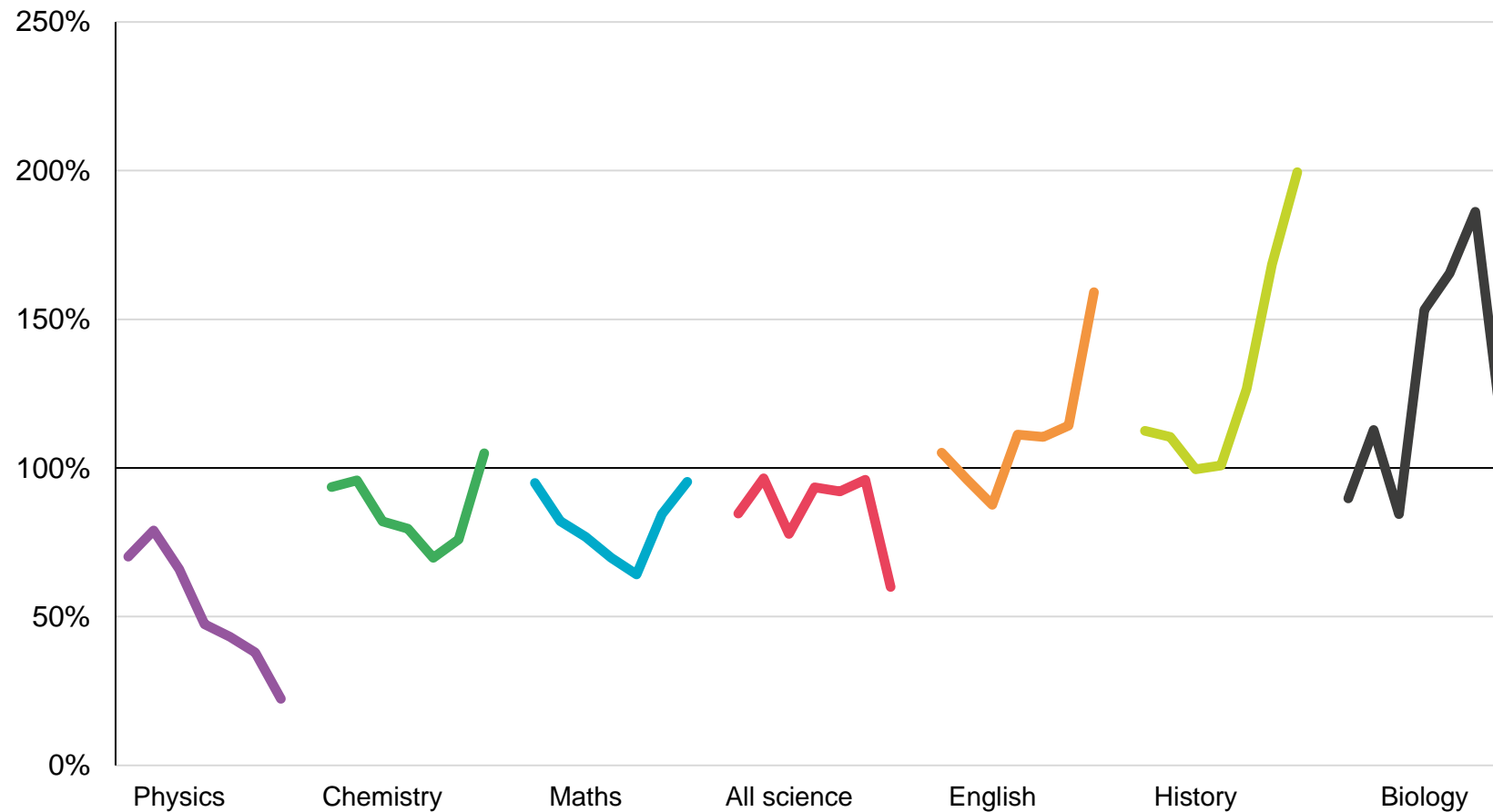


Source: NFER analysis of UCAS data

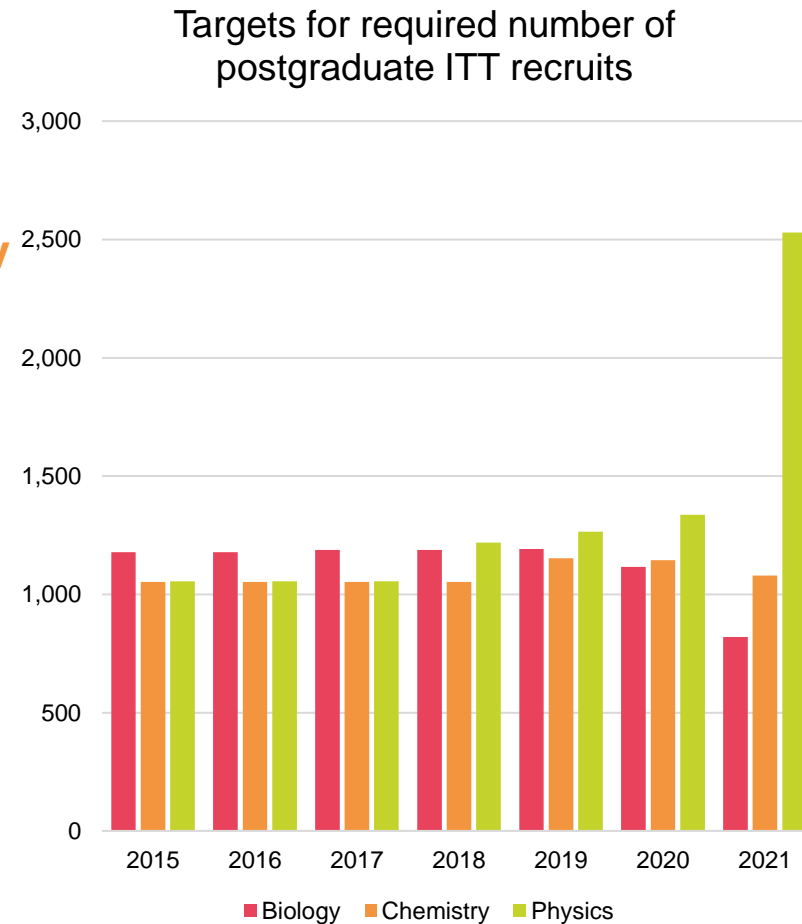
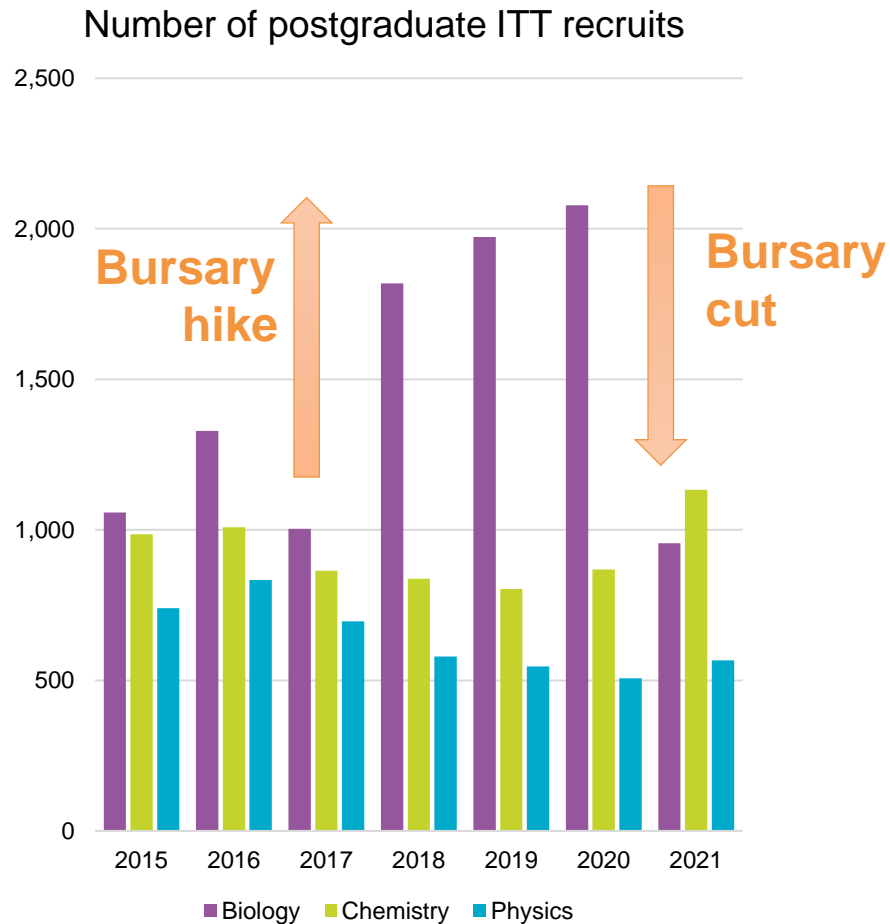
Science teacher recruitment suffers most when market is tight



Postgraduate ITT recruitment, as a proportion of target (2015/16 - 2021/22)

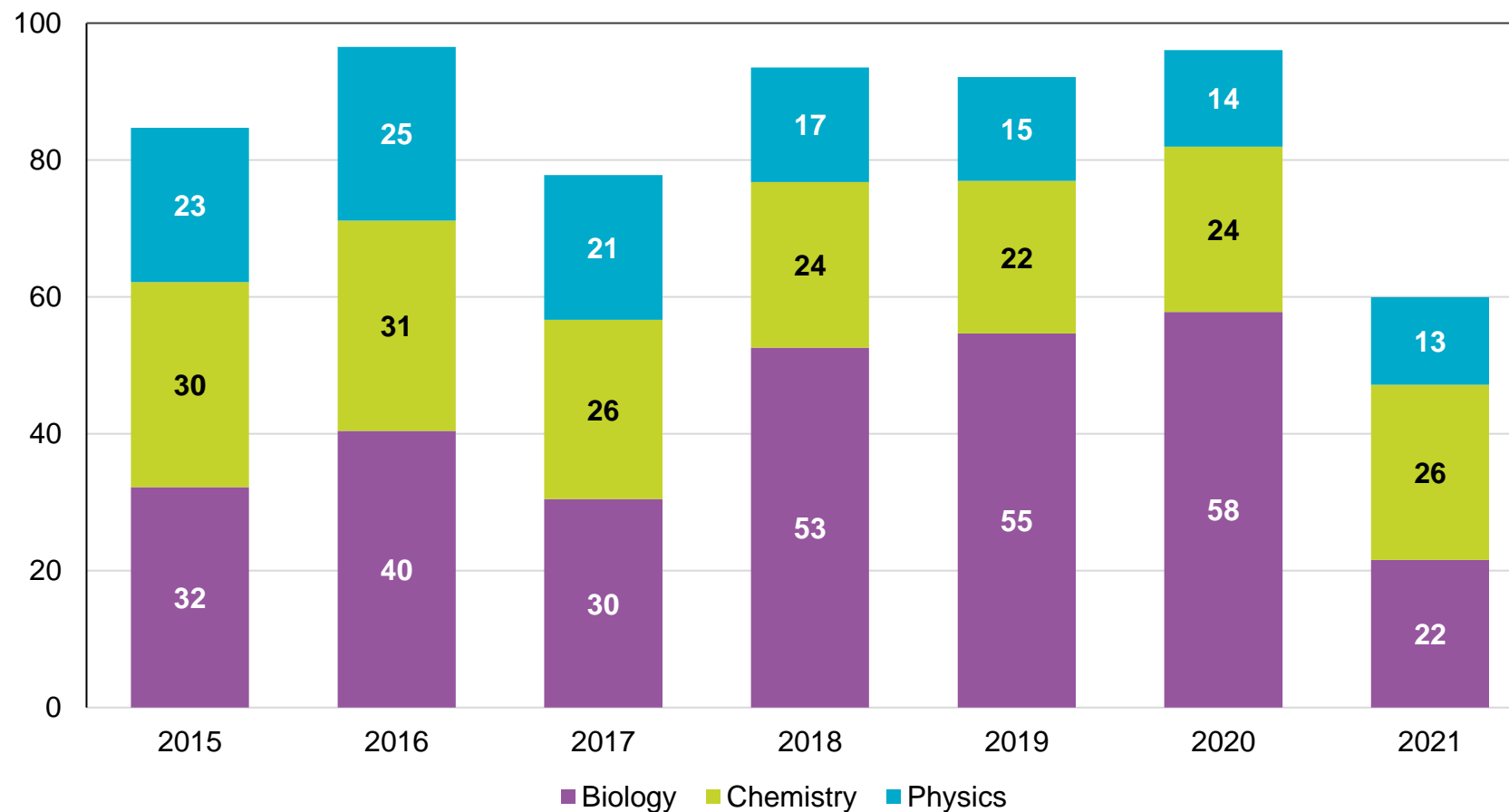


Recruitment trends and target-setting approach



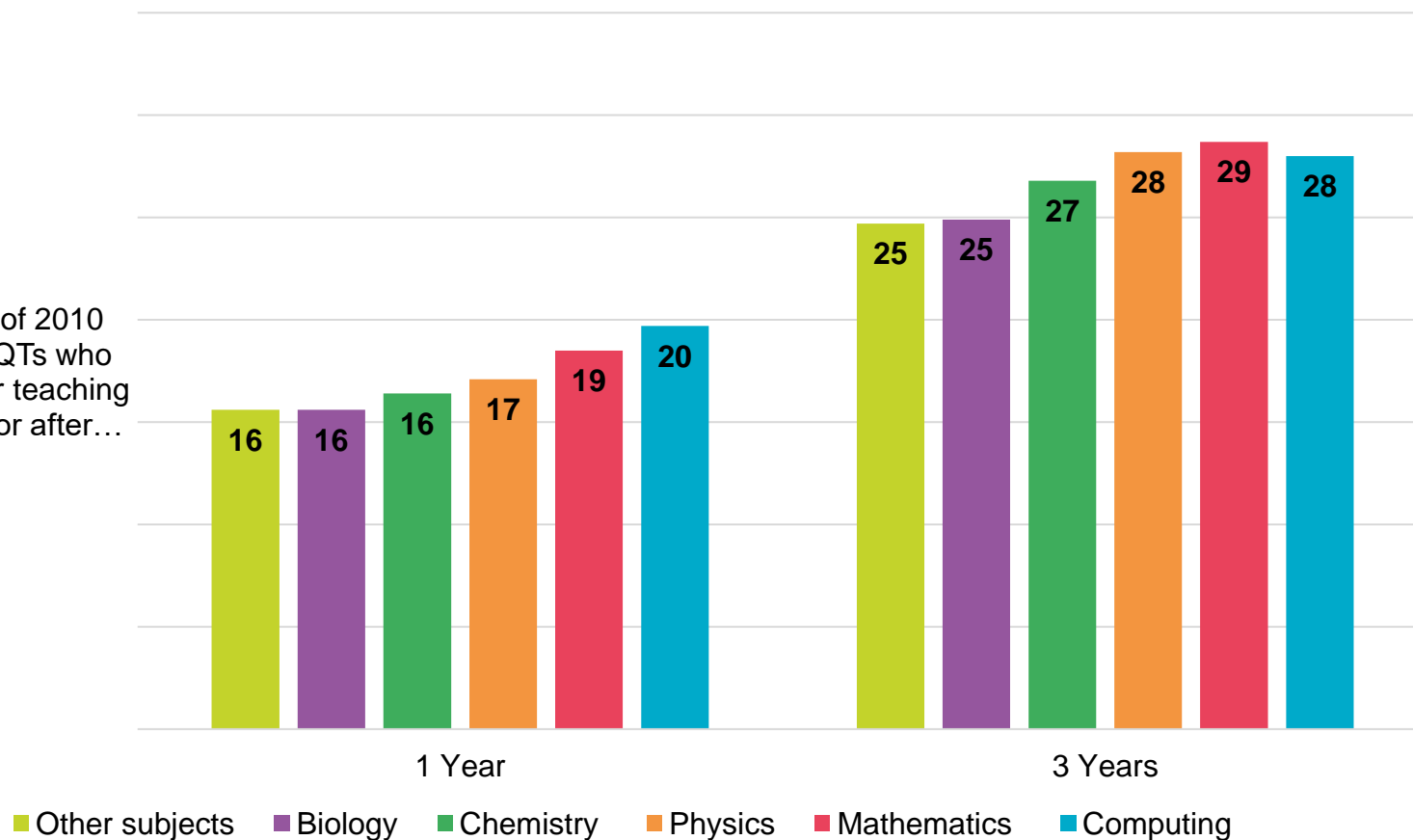
Meeting overall supply vs specialism balance

Breakdown of postgraduate ITT recruits, as a proportion of the overall science target (%)



Leaving rate of early-career teachers is higher among STEM teachers

Proportion of 2010 cohort of NQTs who are no longer teaching in state sector after...



Source: DfE Teacher Analysis Compendium 4, 2018

Teacher workload and job satisfaction



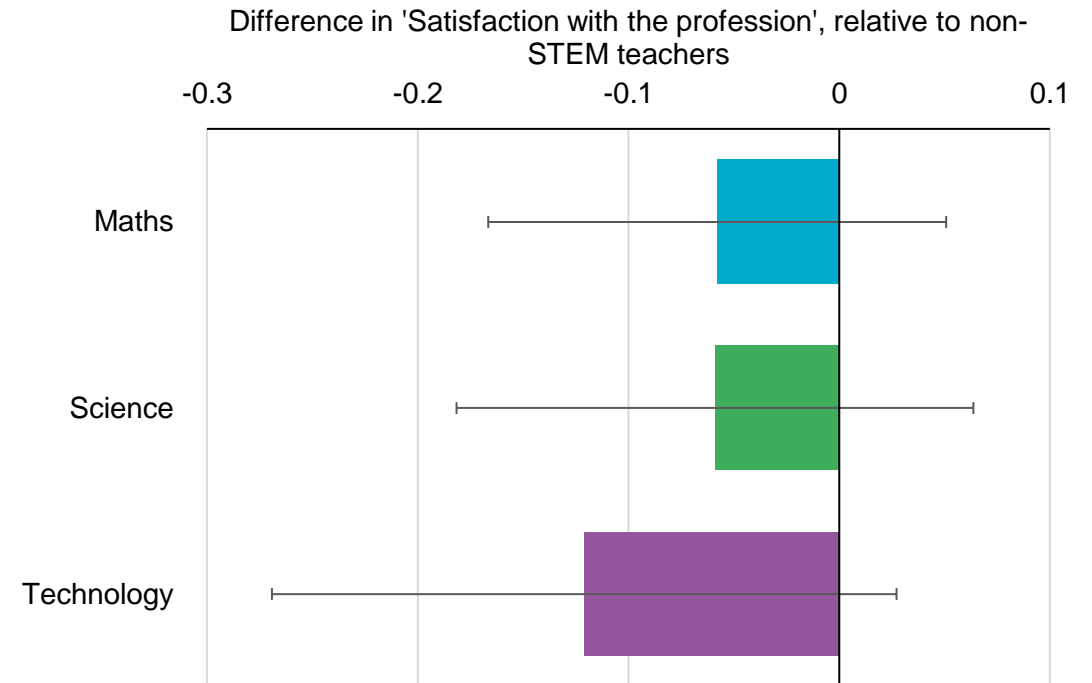
Few differences in job satisfaction and workload for STEM teachers

Workload is reason most cited by ex-teachers for why they left

- But similar for STEM and non-STEM (DfE)

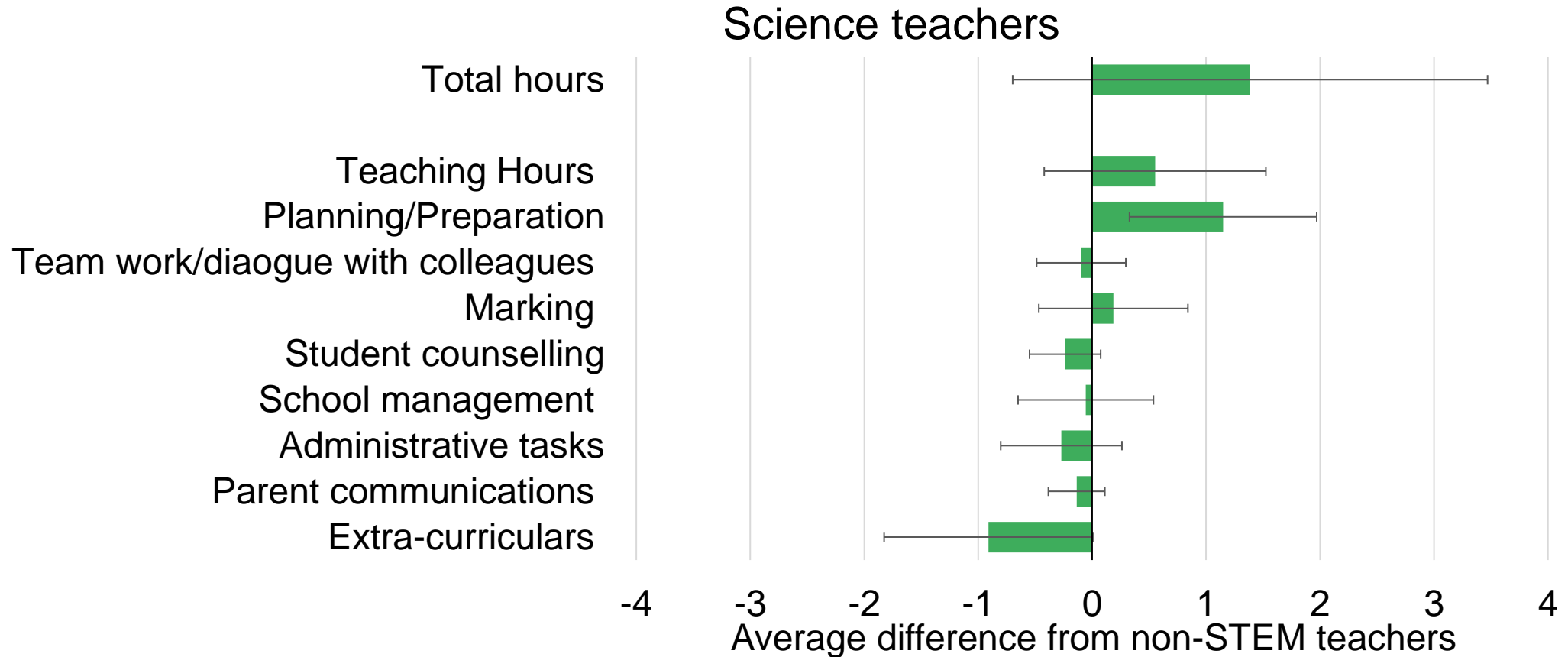
Job satisfaction is a key factor associated with teachers leaving

- Little difference in teacher job satisfaction between subjects



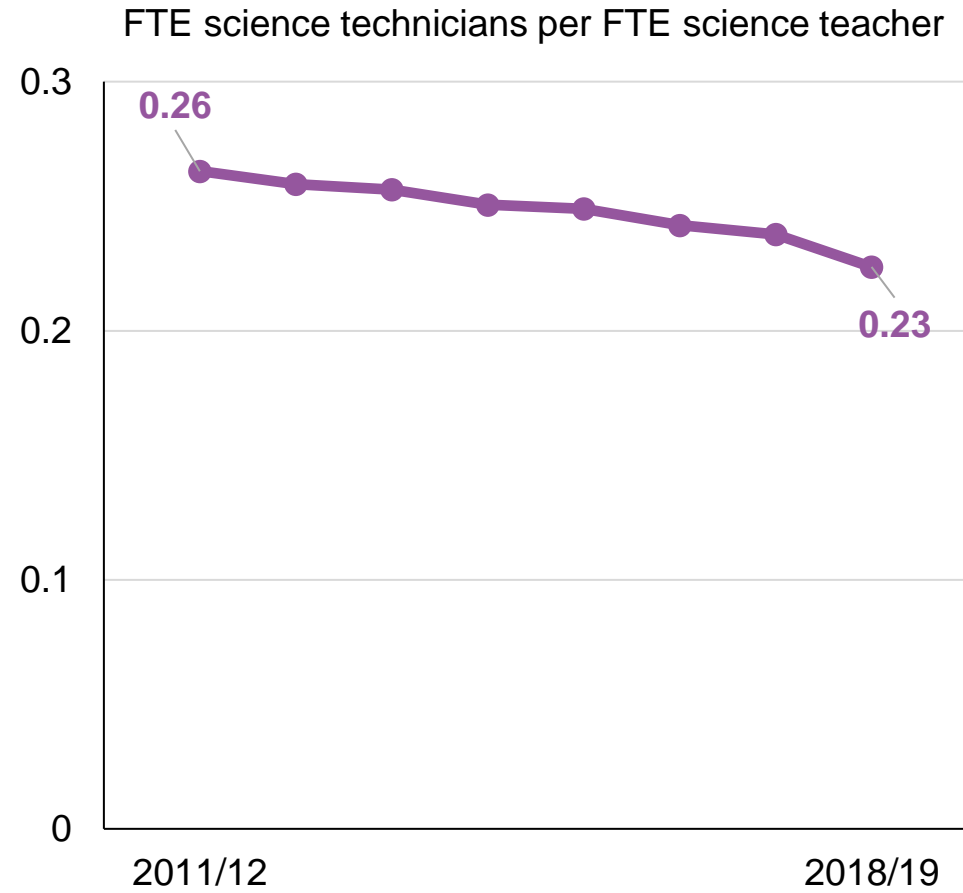
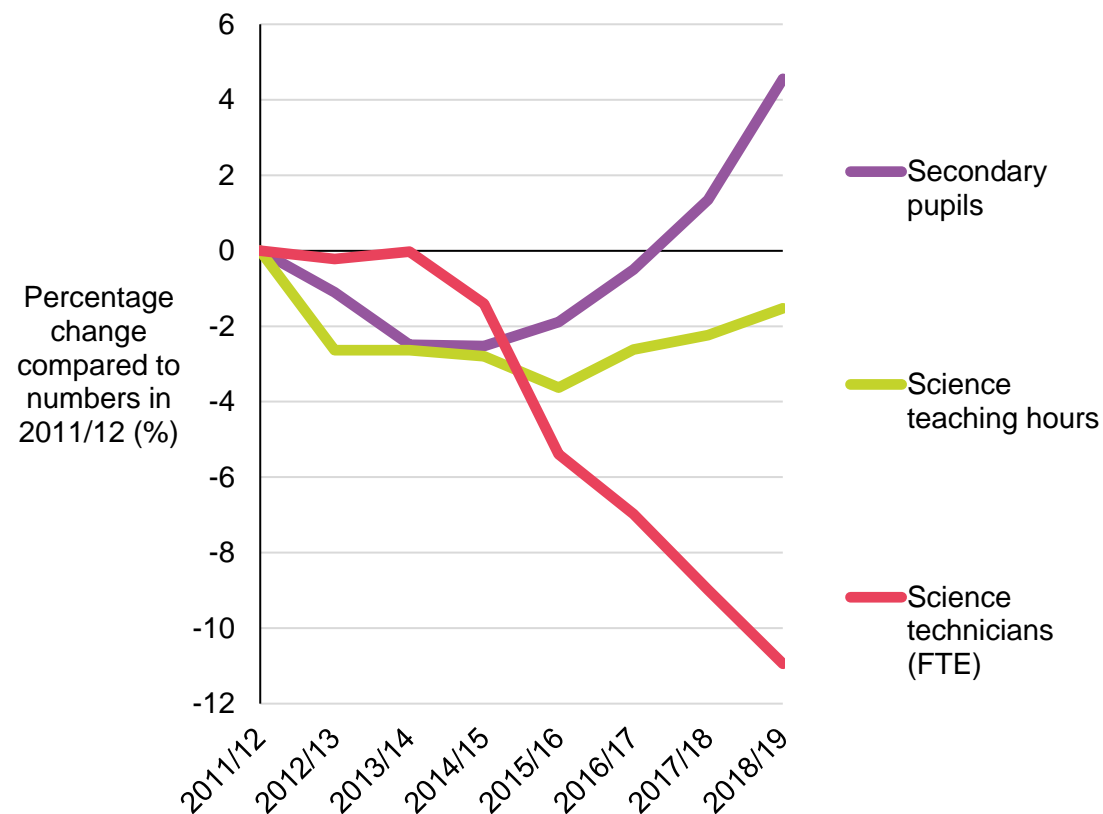
Source: NFER analysis of 2013 OECD TALIS data

Science teachers work slightly longer hours, spend more time planning/ preparing



Source: NFER analysis of 2013 OECD TALIS data

Ratio of science technicians to science teachers has fallen since 2011/12



Source: NFER analysis of School Workforce Census data, 2020

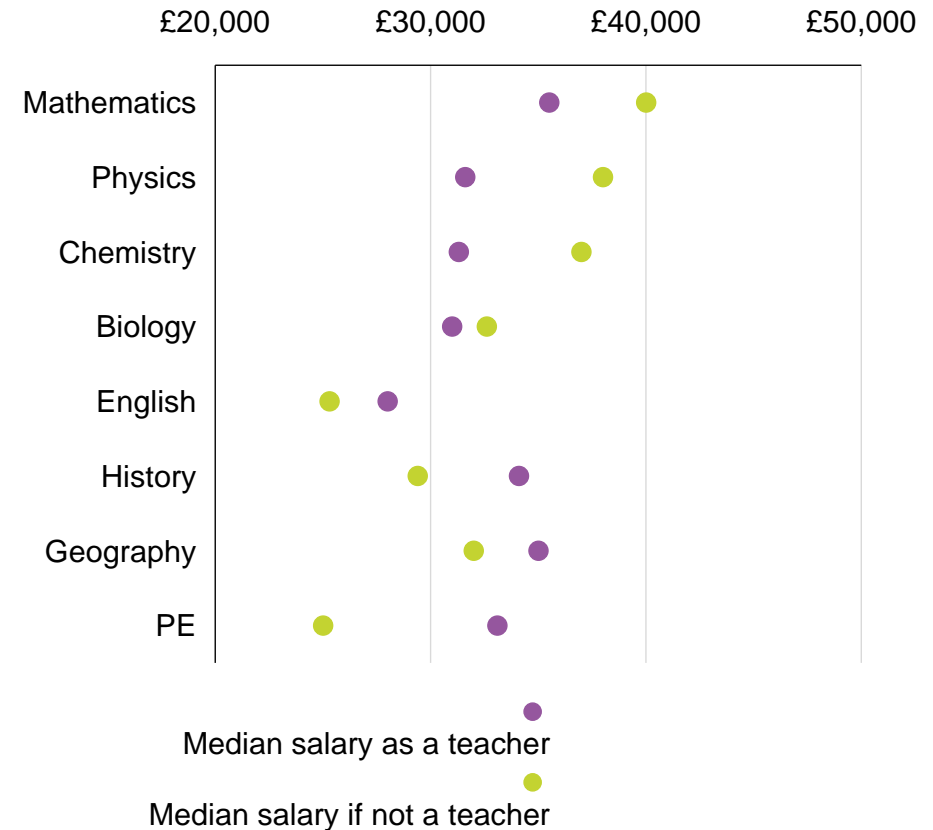
Teacher pay and outside options



Teacher pay relative to the outside option is a key factor

Pay is a more compelling explanation for STEM recruitment and retention challenges

Graduates with a STEM degree have better-paying options outside of teaching



Source: Migration Advisory Committee, 2016

Conclusions

-
- **STEM teacher supply has been challenging for many years, but Covid-19 has offered a brief reprieve due to uncertainty in the wider labour market**
 - **Similar challenges are re-emerging as the labour market recovers**
 - **What to do?**
 1. Reduce teacher workload to ensure it is manageable and sustainable
 - Marking, admin/ assessment, planning & preparation
 2. Ensure teacher pay (at least) keeps pace with growth in the wider economy
 3. Targeted financial incentives for hard-to-recruit subjects
 - Balanced between incentivising recruitment and retention in state-sector

Links

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- **Teacher Labour Market in England – 2021 Annual Report**
 - **Retaining Science, Mathematics and Computing teachers**
 - **The Science Technician Workforce in English Secondary Schools**

1946-2021

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